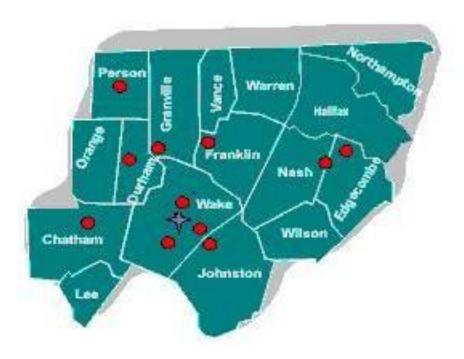
2012 ANNUAL MONITORING NETWORK PLAN FOR THE NORTH CAROLINA DIVISION OF AIR QUALITY

VOLUME 2

SITE DESCRIPTIONS BY DIVISION OF AIR QUALITY REGIONAL OFFICE AND METEROPOLITAN STATISTICAL AREA

D. THE RALEIGH MONITORING REGION



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D. The Raleigh Monitoring Region

The Raleigh Monitoring Region of North Carolina, shown in Figure D1, consists of six sections: (1) the Durham-Chapel Hill Metropolitan Statistical Area (MSA) (Chatham, Durham, Orange, and Person Counties), (2) the Northeastern Piedmont (Granville, Halifax, Northampton, Vance, and Warren Counties), (3) the Raleigh Cary MSA (Franklin, Johnston, and Wake Counties), (4) the Rocky Mount MSA (Edgecombe and Nash Counties), (5) the Wilson Micropolitan Statistical Area (Wilson County), and (6) the Sanford Micropolitan Statistical Area (Lee County).

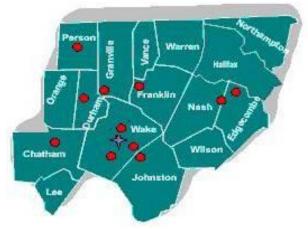


Figure D1. The Raleigh Monitoring Region
The red dots show the approximate locations of
most of the monitoring sites in this region.

(1) Durham-Chapel Hill MSA

The Durham-Chapel Hill MSA consists of four counties: Chatham, Durham, Orange and Person. The major metropolitan areas are the Cities of Durham and Chapel Hill. The North Carolina Division of Air Quality (NC-DAQ) currently operates three monitoring sites in the Durham-Chapel Hill MSA. These sites are located at Pittsboro (Chatham County), the Durham Armory in Durham (Durham County), and Bushy Fork (Person County). The locations of these monitors are shown in Figure D2.



A is the Pittsboro monitoring site; B is the Durham monitoring site; C is the Bushy Fork monitoring site. The circles around the monitoring sites approximate the scales of representation (urban - 4 to 50 Km for Pittsboro ozone and fine particles and Bushy Fork ozone; neighborhood – 0.5 to 4 Km for Durham Armory ozone and fine particles).

Figure D2. Location of Monitors in the Durham-Chapel Hill MSA.

At the Pittsboro (37-037-0004) site the NC-DAQ operates a seasonal ozone monitor, a one-in-three day fine particle Federal Reference Method (FRM) monitor, and a special purpose sulfur dioxide monitor. A picture of the site and views looking north, east, south, and west are provided in Figure D3 through Figure D7. The Pittsboro ozone site is an upwind site for the Durham-Chapel Hill MSA. Sulfur dioxide monitoring on an every third year schedule started at the site in January 2008 as a background site for obtaining data for Prevention of Significant Deterioration (PSD) modeling requirements for industrial expansion.



Figure D3. The Pittsboro Ozone, Fine Particle and Sulfur Dioxide Monitoring Site (37-037-0004)



Figure D4. Looking North from the Pittsboro Site



Figure D5. Looking West from the Pittsboro Site



Figure D6. Looking East from the Pittsboro Site



Figure D7. Looking South from the Pittsboro Site

At the Durham Armory site the NC-DAQ operates a seasonal ozone monitor, a one-in-three day fine particle FRM monitor, a one-in-three day low volume PM_{10} monitor, and a continuous fine particle monitor. A picture of the site as well as views looking north, northeast, east, southeast, south, southwest, west, and northwest are provided in Figure D8 through Figure D16. This fine-particle monitoring site is the design value site for the MSA. On January 1, 2011, the NC-DAQ started operating the low volume PM_{10} monitor at the site to meet minimum monitoring requirements for PM_{10} for the Durham-Chapel Hill MSA and to provide data for determining $PM_{10-2.5}$.



Figure D8. The Durham Armory Ozone, Ozone Precursor, and Fine Particle Site



Figure D9. Looking North from the Durham Armory Site



Figure D10. Durham Armory Site Looking Northwest



Figure D11. Durham Armory Site Looking Northeast



Figure D12. Looking East from the Durham Armory Site



Figure D13. Looking West from the Durham Armory Site



Figure D14. Durham Armory Site Looking Southwest

At the Bushy Fork site the NC-DAQ operates a seasonal ozone monitor. A picture of the site as well as views looking north, east, south, and west are provided in Figure D17 through Figure D21. The Bushy Fork site was established as the downwind site for the Burlington MSA. This site is the third ozone-monitoring site in the MSA. 40 CFR 58 Appendix D requires the Durham-Chapel Hill MSA to have two ozone monitoring sites. Because this site is not required by the EPA and is a single pollutant site, the NC-DAQ may consider relocating this site to another part of the state if ozone monitoring is required elsewhere and additional resources are unavailable.



Figure D15. Durham Armory Site Looking Southeast



Figure D16 Looking South from the Durham Armory Site



Figure D17. Bushy Fork ozone monitoring site



Figure D18. Bushy Fork Site Looking North



Figure D19. Bushy Fork Site Looking West



Figure D20. Bushy Fork Site Looking East



Figure D21. Bushy Fork Site Looking South

In 2008 EPA expanded the **lead monitoring** network to support the lower lead National Ambient Air Quality Standard (NAAQS) of 0.15 micrograms per cubic meter. In December 2010 the EPA revised the monitoring requirements to focus on fence line monitoring located at facilities that emit 0.5 tons or more of lead per year and at National Core (NCore) monitoring sites. These changes to the lead monitoring network requirements did not impact the Durham-Chapel Hill MSA. This MSA does not have an NCore monitoring station. Also, the Roxboro electricity generating facility emitted less than 0.25 tons of lead in 2010 because of control devices installed on the coal-fired boilers. Modeling performed in 2009 indicated the concentrations of lead in ambient air around the facility are less than 0.01 micrograms per cubic meter, which is far enough below the NAAQS that no fence-line monitoring is required for this facility.

At this time no new **ozone monitoring** requirements are expected. However, the MSA currently exceeds the minimum number of monitors required by 40 CFR 58 Appendix D for population exposure monitoring in urban areas. This area would also not be impacted by rural ozone monitoring requirements as it does not have any Class I Areas.

The Durham-Chapel Hill MSA is affected by the 2010 **nitrogen dioxide** monitoring requirements because its population exceeded the 500,000 threshold in 2009. As a result it is required to have a near roadway monitor. At this time due to lack of funds, the United States Environmental Protection Agency is revising

the regulation to require near road monitors in MSAs with less than one million people to start operating on January 1, 2017. According to the technical assistance document, EPA recommends placing near road monitoring stations along road segments with the highest average annual daily traffic values adjusted for fleet mix. Sites should also be evaluated based on congestion patterns, roadway design, terrain, and meteorology. The segments in the Durham-Chapel Hill MSA with the highest average annual daily traffic adjusted for fleet mix are shown in Table D1.

Table D1. Fleet Equivalent Average Annual Daily Traffic for Road Segments in the Durham-Chapel Hill Metropolitan Statistical Area

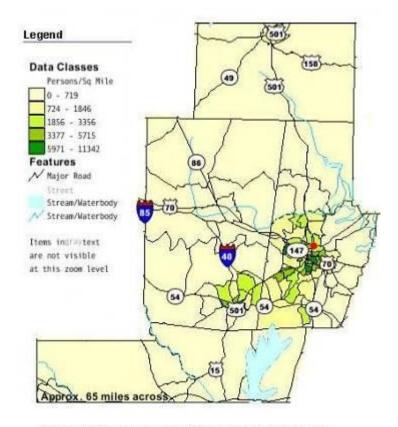
				Percent	2010	Fleet Equivalent
STATION	ROUTE	LOCATION	Station	Passenger	AADT	AADT
(A) 1011	I-40	FROM EXIT 282 TO EXIT 283	09MC0030	90%	163000	309,700
(B) 947	I-40	FROM EXIT 281 TO EXIT 282	09MC0030	90%	159000	302,100
(C) 547	I-40	FROM EXIT 280 TO EXIT 281	09MC0030	90%	152000	288,800
(D) 553	I-40	FROM EXIT 279 TO EXIT 280	10MC0005	94%	151000	239,335
(E) 942	I-40	FROM EXIT 273 TO EXIT 274	09MC0028	90%	112000	208,768
(F) 6	I-85	FROM EXIT 160 TO EXIT 161	09MC0069	88%	97000	206,125
(G) 91	I-85	FROM EXIT 161 TO EXIT 163	09MC0069	88%	94000	199,750
(H) 5	I-85	FROM EXIT 157 to EXIT 160	09MC0069	88%	92000	195,500
(I) 727	I-40	FROM EXIT 278 TO EXIT 279	10MC0005	94%	121000	191,785

The locations of these segments are shown with lettered green and red squares in Figure D22. They stretch from the eastern part of Durham County into central Orange County with heaviest fleet adjusted average annual daily traffic being along I-40 near the Durham-Wake County line. Because the highest ranked sites are within a mile or so of the Raleigh-Cary near road monitoring site off of Triple Oak Road along I-40 between Exit 283 and Exit 284, the NC-DAQ is requesting a waiver for the near road Durham-Chapel Hill monitoring site.



Figure D22. Locations of Segments with Highest Fleet Adjusted AADT in the Durham-Chapel Hill MSA

The 2010 **sulfur dioxide monitoring** requirements will affect the Durham MSA because of power generating facilities located in Person and Chatham Counties and a large population base. The Durham MSA will be required to have a Population-Weighted Emission Index monitor that will be located at the Armory site as a population exposure monitor. Figure D23 shows the location of the proposed PWEI monitor relative to where people lived based on the 2000 census. Figure D24 shows the distribution of sulfur dioxide emissions among the counties in the MSA. The closest permitted source of sulfur dioxide to the Armory site is Durham Regional Hospital, located 0.5 kilometers northeast of the site, as shown in Figure D25. The hospital reported emitting 0.3 tons of sulfur dioxide in 2006.



Source: U.S. Census Bureau, Census 2000 Summary File 1, Matrix P1.

Figure D23. Location of Proposed Durham-Chapel Hill PWEI Monitor in Relationship to Centers of Population in 2000



Figure D24. Location of the proposed Durham-Chapel Hill PWEI Sulfur Dioxide Monitor (red dot) in Relationship to Sulfur Dioxide Sources



Figure D25. Location of the Armory Monitoring Site (A) in Relationship to the Durham Regional Hospital (B)

Changes to the **carbon dioxide monitoring** requirements do not affect this MSA because the population is too small.

(2) The Northeastern Piedmont

The Northeastern Piedmont consists of five counties: Granville, Halifax, Northampton, Vance, and Warren. There is not an MSA in these counties; however, Henderson Micropolitan Statistical Area is located in Vance County and the Roanoke Rapids Micropolitan Statistical Area consists of Halifax and Northampton Counties. The NC-DAQ currently operates one monitoring site in the Northeastern Piedmont. This site is located at Butner (Granville County). The location of this monitoring site is shown in Figure D26.



Figure D26. Location of the Butner Monitoring Site

A is the Butner ozone monitoring site. The circle around the site approximates the urban scale (4 to 50 Km).

At the **Butner** (37-077-0001) site the NC-DAQ operates a seasonal ozone monitor. A picture of the site as well as views looking north, east, south, and west are provided in Figure D27 through Figure D31. The Butner site was established as the downwind site for the Durham-Chapel Hill MSA when the wind is from the primary direction during the season of highest ozone concentrations.



Figure D27. The Butner Ozone Monitoring Site



Figure D28. Looking North from the Butner Site



Figure D29. Looking West from the Butner Site



Figure D30. Looking East from the Butner Site



Figure D31. Looking South from the Butner Site

This area is not impacted by 2010 changes made to the **lead monitoring** requirements because it does not have facilities that emit 0.5 ton or more of lead per year or NCore monitoring sites.

New **ozone monitoring** requirements, if any, will not impact the Northeastern Piedmont. The area does not have any MSAs that are required by 40 CFR 58 Appendix D to conduct population exposure monitoring in urban areas. This area would also not be impacted by rural ozone monitoring requirements. It does not have any Class I Areas and already has a monitor in Butner (37-077-0001).

The Northeastern Piedmont is not affected by the 2010 **nitrogen dioxide** monitoring requirements because it does not have any roads exceeding the traffic threshold and does not have any MSAs that trigger nitrogen dioxide monitoring requirements. The Northeastern Piedmont is also not affected by the 2010 **sulfur dioxide monitoring** requirements because there are no large sources of sulfur dioxide in this area. This area is also not impacted by the changes to the **carbon dioxide monitoring** requirements because the population is too small.

(3) The Raleigh-Cary MSA

The Raleigh-Cary MSA consists of three counties: Franklin, Johnston, and Wake County. The major metropolitan areas include Raleigh and Cary. The NC-DAQ currently operates five monitoring sites in

the Raleigh-Cary MSA. These sites are located at Franklinton (Franklin County), West Johnston (Johnston County), and Millbrook, Fuquay, and Finley Farm (Wake County).

At the **Franklinton** (37-069-0001) site the NC-DAQ operates a seasonal ozone monitor. A picture of the site and views looking north, east, south, and west are provided in Figure D34 through Figure D36. The Franklinton ozone site was established as the downwind site for the Raleigh MSA when the wind is from the primary direction during the season of highest ozone concentrations. This site is one of four ozonemonitoring sites in the MSA. 40 Code of Federal Regulations (CFR) 58 Appendix D requires the Raleigh MSA to have two ozone monitoring sites.



Figure D34. The Franklinton Ozone Monitoring Site



Figure D32. Looking North from the Franklinton Site



Figure D35. Looking East from the Franklinton Site



Figure D33. Looking West from the Franklinton Site



Figure D36. Looking South from the Franklinton Site

In July 2010, the NC-DAQ moved the site about 10 meters from its original location on the school property due to the widening and paving of a road next to the site.

At the **West Johnston** (37-101-0002) site the NC-DAQ operates a seasonal ozone monitor and a one-in-three day fine particle FRM monitor. The West Johnston ozone site was established as the upwind site for the Raleigh MSA when the wind is from the secondary direction during the season of highest ozone concentrations. This site is one of four ozone-monitoring sites in the MSA. 40 Code of Federal Regulations (CFR) 58 Appendix D requires the Raleigh MSA to have two ozone monitoring sites. The West Johnston fine particle site was established as the third fine particle monitoring site in the MSA because the Raleigh MSA has an estimated population over 1 million people and was required to have three fine particle monitors when its Figure D37. The West Johnston Ozone and Fine design value was 85 % of the standard or greater.



Particle Monitoring Site

Currently the design value for the Raleigh MSA is less than 85 % of the standard so only two monitoring sites are required. The North Carolina Division of Air Quality is planning on adding a continuous fine particle monitor at the site that may eventually replace the FRM monitor. A picture of the site and views looking north, east, south, and west are provided in Figure D37 through Figure D41.



Figure D38. Looking north from the West Johnston site



Figure D39. Looking West from the West Johnston site



Figure D40. Looking East from the West Johnston Site



Figure D41. Looking south from the West Johnston site

At the **Millbrook** (37-183-0014) site the NC-DAQ operates year-round ozone, one-in-three day fine particle FRM, one-in-three day manual SASS and URG fine particle speciation, continuous BAM fine particle, one-in-three day PM₁₀ and PM_{10-2.5}, and trace-level sulfur dioxide, carbon monoxide and reactive oxide of nitrogen monitors. The NC-DAQ also operates continuous fine particle monitors for sulfate, nitrate and black carbon and a meteorological station at this site. A picture of the site as well as views looking north, northeast, east, southeast, south, southwest, west, and northwest are provided in Figure D42 through Figure D50. The Millbrook site is an NCORE (National Community Representative) site. December 27, 2011, the NC-DAQ began analyzing the low volume PM₁₀ filters for lead on a one-in-six day schedule to meet the 2010 monitoring requirements for lead monitoring at NCore sites. Starting in 2013 the NC-DAQ will begin collecting nitrogen dioxide measurements at the site using a photolytic nitrogen dioxide monitor. This site will be the required area wide site for nitrogen dioxide.



Figure D42. Millbrook NCore Monitoring Site



Figure D43. Looking North from the Millbrook Site



Figure D44. Looking Northeast from the Millbrook Site



Figure D45. Looking Northwest from the Millbrook Site



Figure D46. Looking West from the Millbrook Site



Figure D47. Looking Southwest from the Millbrook Site

At the **Fuquay** (37-183-0016) site the NC-DAQ operates a seasonal ozone monitor, established as the upwind site for the Raleigh MSA when the wind is from the primary direction during the season of highest ozone concentrations. Figure D51 through Figure D55 show the site and views looking north, east, south, and west. This site is one of four ozone-monitoring sites in the MSA. 40 CFR 58 Appendix D requires two ozone sites.



Figure D48. Looking East from the Millbrook Site



Figure D49. Looking Southeast from the Millbrook Site



Figure D50. Looking South from the Millbrook Site



Figure D51. Fuquay Ozone Monitoring Site



Figure D52. Looking North from the Fuquay Site



Figure D53. Looking West from the Fuquay Site



Figure D54. Looking East from the Fuquay Site



Figure D55. Looking South from the Fuquay Site

At the **Finley Farm** (37-183-0020) site the NC-DAQ operates a one-in-three day fine particle FRM monitor. A picture of the site as well as views looking north, northeast, east, southeast, south, southwest, west, and northwest are provided in Figure D56 through Figure D62.



Figure D56. The Finley Farm Fine Particle Monitoring Site (37-183-0020)



Figure D57. Looking North from the Finley Farm Site



Figure D58. Looking West from the Finley Farm Site



Figure D59. Looking Southwest from the Finley Farm Site



Figure D60. Looking Northeast from the Finley Farm Site



Figure D61. Looking East from the Finley Farm Site



Figure D62. Looking South from the Finley Farm Site

The December 2010 changes to the **lead monitoring** requirements affect the Raleigh-Cary MSA because it has an NCore monitoring site. Lead monitoring at the Raleigh Millbrook monitoring site started December 27, 2011, using the low-volume PM_{10} monitor already at the site. The Raleigh-Cary MSA does not have any permitted facilities located within its bounds that emit 0.5 ton or more per year of lead.

Any changes to the **ozone monitoring** requirements would not impact the Raleigh-Cary MSA. The MSA currently exceeds the minimum number of monitors required by 40 CFR 58 Appendix D for population exposure monitoring in urban areas. This area would also not be impacted by rural ozone monitoring requirements. It does not have any Class I Areas.

The 2010 **nitrogen dioxide** monitoring requirements affect the Raleigh-Cary MSA. Because its population exceeds the 500,000 threshold, it is required to have a near road monitor. The United States Environmental Protection Agency recommends states choose near road monitoring stations along road segments with the highest average annual daily traffic values adjusted for fleet mix. Sites should also be evaluated based on congestion patterns, roadway design, terrain, and meteorology. The segments with the highest average annual daily traffic adjusted for fleet mix are shown in Table D2.

Table D2. Fleet Equivalent Average Annual Daily Traffic for Selected Road Segments in the Raleigh-Cary Metropolitan Statistical Area

				Percent	2010	Fleet Equivalent
STATION	ROUTE	LOCATION	Station	Passenger	AADT	AADT
(A) 1	I-40	FROM EXIT 287 TO EXIT 289	09MC0031	94%	147000	227,703
(B) 813	I-40	FROM EXIT 285 TO EXIT 287	09MC0031	94%	141000	217,140
(C) 807	I-40	FROM EXIT 283 TO EXIT 284	09MC0031	94%	132000	203,280
(D) 811	I-40	FROM EXIT 284 TO EXIT 285	09MC0031	94%	128000	197,120
(E) 634	I-40	FROM EXIT 297 TO EXIT 298	09MC0033	92%	113000	196,394
(F) 889	I-40	FROM EXIT 300 TO EXIT 301	10MC0021	91%	101000	182,810
(G) 630	I-40	FROM EXIT 299 TO EXIT 300	09MC0034	93%	108000	176,040
(H) 635	I-40	FROM EXIT 295 TO EXIT 297	09MC0032	93%	107000	174,410

The locations of these segments are shown with lettered red and green squares in Figure D22. They stretch along I-40 from the Durham-Wake County line in the west to the eastern side of Raleigh.



Figure D63. Possible Locations of Future Raleigh-Cary Near-Road Nitrogen Dioxide Monitoring Sites

The segment with the highest fleet adjusted average annual daily traffic is located on I-40 between Harrison and Wade Avenue. However, there is not a safe, accessible location to place a monitoring station along this segment of the roadway or along the second highest segment. As a result, the near road monitoring station will be placed on the west bound side of I-40 between Exit 283 and 284 off of Triple Oak Road.

The Raleigh-Cary MSA has over 1 million people so it is also required to have a community or area-wide monitor. This monitor will be located at the Raleigh Millbrook NCore monitoring site and will start operating on January 1, 2013.

The 2010 **sulfur dioxide monitoring** requirements did not affect the Raleigh-Cary MSA because there are no large sources of sulfur dioxide in the MSA. This MSA will be affected by the changes to the **carbon dioxide monitoring** requirements because near road carbon dioxide monitoring is required in MSAs greater than one million people starting in 2017.

(4) Rocky Mount MSA

The Rocky Mount MSA consists of two counties: Edgecombe and Nash County. The major metropolitan area is the City of Rocky Mount. The NC-DAQ currently operates two monitoring sites in the Rocky Mount MSA. These sites are located in Edgecombe County in Rocky Mount and Leggett. The locations of these monitoring sites are shown in Figure D64.



A is the Leggett ozone and continuous fine particle site; B is the Springfield Road manual fine particle site. The circle approximates the neighborhood scale of representation (0.5 to 4 Km) for the fine particle monitor. The scale of representation for the ozone monitor is regional which is over 50 Km so the scale of representation is not shown on this map.

Figure D64. Location of the Monitoring Sites in the Rocky Mount MSA

At the **Springfield Road** site in Rocky Mount the NC-DAQ operates a one-in-three day fine particle FRM monitor. The site is shown in Figure D65. As the NC-DAQ converts over to a wireless polling network, this monitor may eventually be replaced with a regulatory continuous fine particle monitor.



Figure D65. The Springfield Road Fine Particle Monitoring Site in Rocky Mount

At the Leggett site the NC-DAQ operates a seasonal ozone monitor and a nonregulatory continuous fine particle monitor. The ozone monitor is required for the MSA. In April 2011, the NC-DAQ added a continuous fine particle monitor to the site to enable real time fine particle air quality index reporting and fine particle forecasting. Figure D66 through Figure D74 show the site as well as views looking north, northeast, east, southeast, south, southwest, west, and northwest.



Figure D66. Leggett Seasonal Ozone Monitoring Site



Figure D67. Looking North from the Leggett Site



Figure D68. Looking Northwest from the Leggett Site



Figure D69. Looking West from the Leggett Site



Figure D70. Looking Southwest from the Leggett Site



Figure D71. Looking Northeast from the Leggett Site



Figure D72. Looking East from the Leggett Site



Figure D73. Looking Southeast from the Leggett Site



Figure D74. Looking South from the Leggett Site

Changes made to the **lead monitoring** requirements in December 2010 did not affect the Rocky Mount MSA because it does not have an NCore monitoring site and does not have any permitted facilities located within its bounds that emit 0.5 tons or more of lead per year. ¹

Any changes to the **ozone monitoring requirements** are not expected to affect the Rocky Mount MSA. The MSA already has the minimum number of monitors required by 40 CFR 58 Appendix D for population exposure monitoring in urban areas. This area should not be affected by rural ozone monitoring requirements because it does not have any Class I Areas.

The 2010 **nitrogen dioxide monitoring** requirements do not affect the Rocky Mount MSA because its population is less than 500,000. It also is not affected by the 2010 sulfur dioxide monitoring requirements because there are no large sources of sulfur dioxide in the MSA. This area was also not affected by the changes to the **carbon dioxide monitoring** requirements because the population is too small.

(5) The Wilson Micropolitan Statistical Area

The Wilson Micropolitan Statistical Area consists of Wilson County. There currently is no Metropolitan Statistical Area in Wilson County; however, the Wilson Micropolitan Statistical Area is located here. The Wilson area is growing and will soon be large enough to become an MSA. The NC-DAQ currently does not operate any monitoring sites in the Wilson Micropolitan Statistical Area; however, when Wilson

¹ Data obtained from the NC-DAQ emission inventory database.

becomes an MSA, the NC-DAQ may be required to add an ozone monitor to the MSA if the ozone monitoring regulations are changed to require ozone monitoring in MSAs without design values. Monitoring sites are located in four neighboring counties: Johnston, Wayne, Pitt and Edgecombe. The locations of these monitors are shown in Figure D75.



The Wilson Micropolitan Statistical Area is outlined in heavy black line. A is the Leggett site; B is the Springfield Road site; C is the West Johnston site; D is the Dillard School site; E is the Pitt County Agricultural Center site. Circles around the monitors approximate the scale of representation (neighborhood – 0.5 to 4 Km for the Springfield Road, West Johnston, Dillard, and Pitt Co Ag Center fine particle monitors, urban – 4 to 50 Km for the West Johnston ozone monitor, and regional - 50 Km plus for the Leggett and Pitt Co Ag Center ozone monitors).

Figure D75. Locations of Monitors Surrounding the Wilson Micropolitan Statistical Area

The Wilson Micropolitan Statistical Area was impacted by changes made to the **lead monitoring** requirements in December 2010 because it has a permitted facility located within its bounds that emits more than 0.5 tons per year of lead. Saint-Gobain Containers, LLC, reported 2009 lead emissions of 0.84 tons. The NC DAQ requested and received a waiver for Saint-Gobain based on the results of modeling. Model results indicate the maximum ambient lead concentration in the ambient air at and beyond the fence line is 0.015 micrograms per cubic meter, well below the 0.075 micrograms per cubic meter (50 % of the NAAQS) threshold for monitoring.

Any changes to the **ozone monitoring** requirements will not impact the Wilson Micropolitan Statistical Area until it becomes an MSA. As long as it is not an MSA, it does not have to meet population exposure monitoring requirements for urban areas. It is possible that the Wilson Micropolitan Statistical Area could be reclassified as an MSA in 2013 when the MSA classifications are scheduled to be revised. Rural ozone monitoring requirements will also not impact this area. There are no Class I areas in Wilson County and existing monitors in other micropolitan statistical areas in the state will be used to meet any monitoring requirements for monitoring within a micropolitan statistical area.

The Wilson Micropolitan Statistical Area is not impacted by the 2010 **nitrogen dioxide monitoring** requirements because its population is less than 500,000. It also is not impacted by the 2010 **sulfur dioxide monitoring** requirements because the population is too small and the sulfur dioxide emissions are too low to trigger PWEI monitoring. This area is also not impacted by the changes to the **carbon dioxide monitoring** requirements because the population is too small.

² ibid.

Appendix D.1 Annual Network Site Review Forms for 2011

Pittsboro

Durham Armory in Durham

Bushy Fork

Butner

Franklinton

West Johnston in Johnston County

Millbrook in Raleigh

Fuquay

Finley Farm in Raleigh

Springfield Road in Rocky Mount

Leggett

Site Information

Region RRO Site Name UP		AQS Site # 37- 037 - 0004				
Street Address_ RUSSET ROAD			City PITTSBORO			
Urban Area Not in an Urban Area Core-based Statistical Area Durham, NC						
Enter Exact						
Longitude079	9' 55"	Latitude 35.45	32"		Method of Measuring	
In Decimal Degrees		In Decimal Degrees		GPS	Explanation:	
Elevation Above/belo			- 1			
Name of nearest road to	inlet probe _	RUSSET ROAD			ADT Year	
Comments:						
Distance of site to neare	st major road	(m) <u>500.00</u> Direction from	om site to r	nearest ma	ajor road <u>W</u>	
Name of nearest major i	road15-	501	ADT 120	00 Year	2009	
Comments:		Table 1 August 1 Augu			200	
Site located near electric	cal substation/	high voltage power lines	7		Yes □ No 🗵	1
Distance of site to nea	rest railroad	track	(m)		Direction to RR NA	
- NOACON PORTION CONTRACTOR TO STATE OF THE					Direction	
Distance of site to nea	nd drip line of	water tower (m)	Direction	from site	to water tower N.	Δ
Explain any sources of	f potential bi	as; include cultivated f	ields, loos	se bulk s	torage, stacks, vents, railroad tracks	
		staurants, and swimmi			70.0	<i>(</i> 0)
A. T. C.						
ANSWER ALL APP			7	(144 (174))		
Parameters	Mo	nitoring Objective		Scale	Site Type	
□NA		ral/Background_SO2_	Mic	ro	SLAMS O3	
SO ₂ (NAAQS) SO ₂ (trace-level)		est Concentration	□Mid	dle	NCORE	
NO _x (NAAQS)	TARRA	O3 Concentration lation Exposure	☐Neig	hborhoo	dSPM_SO2	
☐HSNO _y		e Oriented	⊠Urb	an	SPM/OPN	
⊠ O ₃	Trans	sport	11 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	ional		
☐ NII ₃ ☐ Hydrocarbon		nd Background O3			_	_
Air Toxics	_]Welf	are Related Impacts				
HSCO (Not Micr	0)					
CO (trace-level)	. occupati 2 15	mº Voo M No □	Cina	cottant ma	easured height from ground (meters)	
					easured neight from ground (meters) _ ucture≥1 m? Yes⊠ No ☐	
Actual measured distan	ce from probe	to supporting structure (i	meters)	amg suc	acture - I in: Tes No	
		mitoring probe inlets > 1			Yes No NA	a
		drip line? Yes 🛛 *1		wer "d c		
*Is probe > 10 m from	the nearest tree	e drip line if tree acts as a	n obstructi	on? Yo	es □ *No ⊠	
*Is probe > 10 m from the nearest tree drip line if tree acts as an obstruction? Yes *No *Direction from probe to tree Direction from probe to tree *E						
*Height of tree (m) 15						
	to air flow? *	Yes [] (answer *'d ques	tions) No	XI .		
*Identify obstacle Distance from probe inlet (m) Direction from probe inlet to obstacle						
						۰П
Distance of probe to no					rest traffic lane	
CONTRACTOR THE TRANSPORTED STATES						

UP 2011SITE REVIEW FORM2.DOCX

Parameters	Monitoring Objective	Scale	Site Type
NA □CO (Micro Only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	Micro	SLAMS SPM SPM/OPN NONREGULATORY
Probe inlet height (from gr Actual measured distance	round) 2.5 - 3.5 m? from probe inlet to ground (meters) _		Yes No
	m horizontal (wall) and/or vertical (ro from probe to supporting structure (m		> I m? Yes ☐ No ☐
Distance of probe inlet to	nearest intersection > 10 m? nearest traffic lane 2 - 10 m? nearest tree drip line? Yes*No	O Consumer 9'd supertion	Yes No Yes No
*Is probe > 10 m from the	nearest tree drip line if tree acts as an	obstruction? Yes 🗌	*No 🗆
Are there any obstacles to *Identify obstacle I *Is distance from inlet pro	air flow? *Yes [(answer *'d question Distance from probe inlet (m) L be to obstacle at least twice the height st traffic lane (m) Direction fr	Direction from probe inle that the obstacle protrud	les above the probe? Yes 🔲 No 🗍
Parameters	Monitoring Objective	Scale	Site Type
⊠NA □NO _y (trace-level)	General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	Micro	□SLAMS □ NCORE
Probe inlet height (from g	round) 10-15 m?		Yes No
Actual measured distance	from probe inlet to ground (meters)		
	m horizontal and/or vertical supporting from probe to supporting structure (m-		Yes No No
Distance of probe inlet fro	m other monitoring probe inlets > 1 m	?	Yes No NA
*Is probe > 10 m from the *Distance from probe to tr	nearest tree drip line? Yes *No nearest tree drip line if tree acts as an ee (m)	obstruction? Yes	
*Height of tree (m)	air flow? *Yes [(answer *'d question	one) No 🗀	
*Identify obstacle I	Distance from probe inlet (m)I he to obstacle at least twice the height	Direction from probe inle	les above the probe? Yes 🔲 No 🔲

Parameters	Monitoring Objective	Scale	Site Type
NA □NO₂ (Near Road only) □CO (Near Road only)	Transport Welfare Related Impacts	□Micro	SLAMSSPMNONREGULATORY
Distance of probe inlet from Actual measured distance from	and) 2-15 m? Yes No horizontal (wall) and/or vertical (recomprobe to supporting structure (moother monitoring probe inlets > 1 m	of) supporting structure > eters)	
A restrict to the case of the case of the case of	arest tree drip line? Yes *No	Nasara — san	
*Is probe > 10 m from the n	earest tree drip line if tree acts as an	obstruction? Yes	*No 🗆
*Identify obstacle Dis *Is distance from inlet probe	r flow? *Yes [(answer *'d questic stance from probe inlet (m)Dir to obstacle at least twice the height traffic lane (m) Direction	rection from probe inlet to that the obstacle protrude	es above the probe? Yes 🗌 No 🔲
Parameters	Monitoring Objective	Scale	Site Type
D TSP	Highest Concentration Population Exposure Source Oriented Background Transport Welfare Related Impacts	Urban	
	and)		□ > 15 m
	ontal (wall) and/or vertical (platform om probe to supporting structure (me		ture > 2 m? Yes No
Actual measured distance be	PM-10, TSP or Pb sampler inlets = tween collocated probes (meters) _ colume inlet and any other high or lo		
Is probe > 20 m from the ne	arest tree drip line? Yes 🗌 *No	(answer *'d question	15)
*Distance from probe to tree *Height of tree (m)		Direction from	*No prohe to tree
Are there any obstacles to ai	r flow? *Yes 🗌 (answer *'d questio	ons) No 🗌	
*Is distance from inlet probe		that the obstacle protrude	es above the probe? Yes 🔲 No 🗍
Distance of probe to nearest	traffic lane (m) Direction	from probe to nearest trai	fic lane

Parameters	Monitoring Objective	Scale	Site Type
NA Air flow < 200 L/min NA NEW PM2.5 NA NA NEW PM2.5 NA NA NEW PM2.5 NA NA NA NA NA NA NA NA NA N	General/Background Highest Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	Micro Middle Neighborhood Urban Regional	SI.AMS NCORE SPM NONREGULATORY
Distance of inlet from horizations and inlets of a site = 1 m or greater? Distance between all low voor greater? Are collocated PM2.5 Moni TEOM, BAM & TEOM) Let	und) \[\leq 2 m \] \[\text{ 2-7m } \] om probe inlet to ground (meters) \[\text{ on train probe inlet to ground (meters)} \] ontal (wall) and/or vertical (platform on the plane) of the problem of the plane monitor inlets and any Hi-Voluntors (Two FRMs, FRM & BAM, FRM to the problem of the plane) of the problem of the	r roof) supporting structure > low volume monitor at the ne PM-10 or TSP inlet = 2 m *Yes (answer	Yes □ No □ NA ☒
*Are collocated PM2.5 sam Is an URG 3000 monitor co * Distance between collocat * Are collocated speciation Is a low-volume PM10 mon to measure PM10-2.5? *Distance between collocate	pler inlets within 1 m vertically of each llocated with a SASS monitor at the sized speciation sampler inlets - 1 to 4 m sampler inlets within 1 m vertically of itor collocated with a PM2.5 monitor and PM10 and PM2.5 inlets for PM10-2 PM2.5 sampler inlets within 1 m vertically of the PM10 and PM2.5 inlets for PM10-2 PM2.5 sampler inlets within 1 m vertically of the position of the pm10-2 pm2.5 sampler inlets within 1 m vertically of the pm10-2 pm2.5 sampler inlets within 1 m vertically of the pm10-2 pm2.5 sampler inlets within 1 m vertically of the pm2.5 sampler inlets within 1 m verticall	h other? Yes No Letc? *Yes (answer *'d quent? Yes No Letch other? Yes No Letch other? Yes (answer the site Yes (answer the site Answer the site No Letch other? Yes Yes Yes Yes Yes Yes Yes	Give actual (meters) uestions) No NA Give actual (meters) Give actual (meters) r *'d questions) No NA
*Is probe > 10 m from the n *Distance from probe to tree *Height of tree (m) Are there any obstacles to a *Identify obstacle TREE *Is distance from inlet probe Distance of probe to nearest	arest tree drip line? Yes Molecarest tree drip line if tree acts as an ole; (m) 15 if flow? *Yes (answer *'d question) Distance from probe inlet (m) 15 to obstacle at least twice the height the traffic lane (m) 100 Direction from	bstruction? Yes = *No Direction from pros s) No Direction from probe inlet to that the obstacle protrudes abo	she to tree \underline{E} obstacle \underline{E} ve the probe? Yes \square No \square
*2) Change monitoring ob	atus? Yes ⊠ *No □ (answer *`d ojective? Yes □ (enter new objectiv sentativeness? Yes □ (enter new se □ No ⊠	e) No 🛛) No 🖾
Reviewer Roy Doste Ambient Monitoring Coore			DateJanuary 3, 2012 DateJanuary 9, 2012
Revised 2012-05-29	Section Control of the Control of th		1925 (1925 - 1925 (1925 - 1925 - 1925 (1925 - 1925 (1925 - 1925 (1925 - 1925 (1925 - 1925 (1925 - 1925 (1925 -

UP_2011SITE_REVIEW_FORM2.DOCX

Site Information

Region_RRO Site Name <u>DurhamArmory</u>		AQS	AQS Site # 37- 063 - 0015		
Street Address 100 St	adium Drive_	City Durha	City Durham		
Urban Area DURHAM Core-based Statistical Area Durham, NC					
Enter Exact					
Longitude36.032944	Latitude 78.905417	Z N	lethod of Measuring		
In Decimal Degrees	In Decimal Degrees	GPS Ex	olanation: google		
Elevation Above/below Mean		W-1 - 12-11-11-11	112		
Name of nearest road to inlet pro					
			two roads are in the 20k-35k range		
Distance of site to nearest major	Fright Belgick gives	2. (1.1.) [1.1.] (1.1.) [1.1.] [1.1.] [1.1.] [1.1.] [1.1.] [1.1.] [1.1.] [1.1.] [1.1.] [1.1.] [1.1.]	ad <u>W</u>		
Name of nearest major road _U					
Comments: _501-byp is west of	site, not east as previously recor	rded	51 p		
Site located near electrical substa	tion/high voltage power lines?	71)	Yes □ No ⊠		
Distance of site to nearest rails		(m) <u>2760</u> Di	Colores Signature Signature		
Distance of site to nearest pow		(m) 43 Direction			
Distance between site and drip lin		Direction from site to war	ter tower NA s, stacks, vents, railroad tracks,		
construction activities, fast for			, stacks, veins, fairfoad tracks,		
			krmory - stack diesel ve		
Edition Councy Scauton	THYCHES VOMESS, INTES,	CCCI, NGC+CGGIG	SIMOLY SCOON WISSEL VE		
ANSWER ALL APPLICABL					
Parameters	Monitoring Objective	Scale	Site Type		
SO ₂ (NAAQS)	General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	Micro Middle Neighborhood Urban Regional			
Probe inlet height (from ground) 2-15 m? Yes ⋈ No ☐ Give actual measured height from ground (meters) 3.87 Distance of probe inlet from horizontal (wall) and/or vertical (roof) supporting structure > 1 m? Yes ⋈ No ☐ Actual measured distance from probe to supporting structure (meters) 1.12					
Distance of probe inlet from other monitoring probe inlets > 1 m? Yes No NA S Is probe > 20 m from the nearest tree drip line? Yes *No (answer *'d questions)					
*Is probe > 10 m from the nearest tree drip line if tree acts as an obstruction? Yes = *No =					
*Distance from probe to tree (m) Direction from probe to tree					
*Height of tree (m) Are there any obstacles to air flo	11 \$2 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	NY - 🗖			
The second secon					
*Identify obstacle Distance from probe inlet (m)Direction from probe inlet to obstacle					
*Is distance from inlet probe to o					
Distance of probe to nearest traff	ic lane (m) 48 Direction from	n probe to nearest traffic	lane N		

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Parameters	Monitoring Objective	Scale	Site Type
NA □CO (Micro Only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	□Miero	□SLAMS □SPM_ □SPM/OPN □ NONREGULATORY
Probe inlet height (from g Actual measured distance	round) 2.5 - 3.5 m? from probe inlet to ground (meters) _		Yes No
	m horizontal (wall) and/or vertical (ro from probe to supporting structure (m		> 1 m? Yes No
Distance of probe inlet to	nearest intersection > 10 m? nearest traffic lane 2 - 10 m? nearest tree drip line? Yes \(\text{ 'No} \)	o (answer ⁹ 'd questic	Yes No Yes No Ons)
*Is probe > 10 m from the	nearest tree drip line if tree acts as an	obstruction? Yes 🗌	*No 🗆
Are there any obstacles to *Identify obstacle I *Is distance from inlet pro	air flow? *Yes [(answer *'d question Distance from probe inlet (m)I be to obstacle at least twice the height st traffic lane (m)Direction fr	Direction from probe inle that the obstacle protrue	des above the probe? Yes 🔲 No 🗍
Parameters	Monitoring Objective	Scale	Site Type
⊠NA □NO _y (trace-level)	General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	Micro	SLAMS NCORE SPM
Probe inlet height (from g	round) 10-15 m?		Yes No
	from probe inlet to ground (meters) _		
	m horizontal and/or vertical supporting from probe to supporting structure (m-		Yes No
Distance of probe inlet fro	m other monitoring probe inlets > 1 m	?	Yes No NA
	nearest tree drip line? Yes 🗌 *No		
*Is probe > 10 m from the *Distance from probe to to *Height of tree (m)	nearest tree drip line if tree acts as an ree (m)		*No mprobe to tree
	air flow? *Yes [(answer *'d question	ons) No 🗌	
	Distance from probe inlet (m)I the to obstacle at least twice the height st traffic lane (m) Direction		des above the probe? Yes 🔲 No 🔲

Parameters	Monitoring Objective	Scale	Site Type
NA □NO₂ (Near Road only) □CO (Near Road only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	□Micro	SLAMS SPM NONREGULATORY
Distance of probe inlet from Actual measured distance from	and) 2-15 m? Yes No horizontal (wall) and/or vertical (room probe to supporting structure (moother monitoring probe inlets > 1 m	of) supporting structure > eters)	
America problems regionarily reversity in men	arest tree drip line? Yes *No	`aran	
*Is probe > 10 m from the no	earest tree drip line if tree acts as an (m)	obstruction? Yes []	*No 🗆
*Identify obstacle Dis *Is distance from inlet probe	r flow? *Yes [(answer *'d questic stance from probe inlet (m)Dir to obstacle at least twice the height traffic lane (m) Direction	rection from probe inlet to that the obstacle protrude	es above the probe? Yes 🗌 No 🗍
Parameters	Monitoring Objective	Scale	Site Type
D TSP	Highest Concentration Population Exposure Source Oriented Background Transport Welfare Related Impacts	Urban	SLAMS NCORE SPM NONREGULATORY
	and)		□ > 15 m
	ontal (wall) and/or vertical (platform om probe to supporting structure (me		ture > 2 m? Yes ☐ No ☐
Actual measured distance be	PM-10, TSP or Pb sampler inlets = tween collocated probes (meters) _ olume inlet and any other high or lo		
Is probe > 20 m from the ner	arest tree drip line? Yes 🗌 *No	answer *'d question	ns)
*Distance from probe to tree *Height of tree (m)	· · · · · · · · · · · · · · · · · · ·	Direction from	*No probe to tree
Are there any obstacles to air	r flow? *Yes 🗌 (answer *'d questic	ons) No 🗌	
*Is distance from inlet probe	stance from probe inlet (m)Director obstacle at least twice the height	that the obstacle protrude	s above the probe? Yes 🔲 No 🔲
Distance of probe to nearest	traffic lane (m) Direction	from probe to nearest traf	fic lane

Parameters	Monitoring Objective		Scale		Site Type
□NA	General/Background	Dation	ro	⊠SLAN	/IS
Air flow < 200 L/min	Highest Concentration	1 4 Martin 1960	dle	☐ NCO	RE
PM2.5	□Population Exposure		hborhood	L_JSPM_	
	Source Oriented			□ NON	REGULATORY
PM10 Lead (PB)		23301 (1285) (128	sn		
PM2.5 Cont. (TEOM)	Transport	Likegi	ional		
☐ PM2.5 Cont. (BAM) ☐ PM2.5 Spec. (SASS)	Upwind Background				
PM2.5 Spec. (URG)	☐Welfare Related Impacts				
PM2.5 Cont. Spec.		_			
Actual measured distance fro	und) $\square < 2 \text{ m} \qquad \square 2-7 \text{m}$ om probe inlet to ground (meters) teo	m=4.45, FR	M=2.2m and 2.		======================================
	ontal (wall) and/or vertical (platform or tive to tower); teom-1.7m (relative to		orting structure	> 2 m? Yes [☑ No ☑
Distance between inlets of a	ny low volume monitor and any other		monitor at the	Vae 🔯	No 🗆 NA 🗆
site = 1 m or greater?	lume monitor inlets and any Hi-Volun	DM 10	TCD inlat = 2 .	24	
or greater?	nume monitor intessand any rit-volum	ic Par-turo	15F HILL ZI	" Yes 🗌	No □ NA ☒
Are collocated PM2.5 Monit TEOM, BAM & TEOM) Lo	tors (Two FRMs, FRM & BAM, FRM scated at Site?	&	*Yes 🛛 (ans	wer *'d question	ns) No 🗌 NA 📗
*Distance between collocate	ed PM 2.5 sampler inlets = 1 to 4 m?	0.00 84	Yes⊠ No [Give actual	(meters) 2.9(frm-
*Are collocated PM2.5 samp	pler inlets within 1 m vertically of each	n other?	fim) Vee M No F	7 (time actual)	(meters) <u>0.10m</u>
T ITD C 2000it1	llocated with a SASS monitor at the sit	.0 97[questions) No [
* Distance between collocat	ed speciation sampler inlets = 1 to 4 m sampler inlets within 1 m vertically of	1?	Yes No		(meters)
Is a low-volume PM10 mon- to measure PM10-2.5?	itor collocated with a PM2.5 monitor a	it the site	*Yes 🛛 (ans	wer *'d question	ns) No 🗌 NA 🗍
*Are collocated PM10 and I	ed PM10 and PM2.5 inlets for PM10-2 PM2.5 sampler inlets within 1 m vertice	ally of each	other?	Yes ⊠ Yes ⊠	No 🗌 No 🔲
76	arest tree drip line? Yes 🛛 *No [25 (2)		
	earest tree drip line if tree acts as an of e (m)				
	r flow? *Yes [] (answer *'d question	s) No 🛛			
*Identify obstacle Dis	stance from probe inlet (m) Dir	ection from	probe inlet to o	obstacle	
*Is distance from inlet probe	to obstacle at least twice the height th	at the obsta	cle protrudes at	oove the probe?	Yes 🗌 No 🗌
Distance of probe to nearest RECOMMENDATIONS:	traffic lane (m) 40 Direction from p	probe to nea	rest traffic lane	N	
	elus? Yes ⊠ *No □ (answer *'d	muestions)			
	jective? Yes [] (enter new objective) No \square	
	sentativeness? Yes [(enter new so) No 🗆
*4) Relocate site? Yes [
Comments: Ozone inlet is	s .73m and .88m away from, old CO/N	O inlet and	Deposition inst	rument, respect	ively
Reviewertts				Date <u>January</u>	4, 2012
Ambient Monitoring Coord	dinator elt			Date January	5, 2012
Revised 2012-05-29					

DA 2011 SITEREVIEW FORM2.DOCX

Site Information

Region_RRO Site Name BF Street Address_ NC Highway 49		AQ	AQS Site # 37- 145 - 0003 City _Roxboro, NC			
Urban Area ROXE	BORO	Core-ba	sed Statistical	Area Durham, NC		
	Enter Exact					
LongitudeW079				Method of Measuring		
In Decimal Degrees	11.7	mal Degrees	GPS	GPS Explanation: Google Maps		
Elevation Above/below				199		
Name of nearest road to it	nlet probe <u>NC Highw</u>	ay 49	AI	OT 2900 Year 2007		
Comments:						
Distance of site to nearest				(1.1		
Name of nearest major ro	ad NC Highway 49		ADT 29	00 Year 2007		
Comments:						
Site located near electrica	l substation/high volta	ige power lines?		Yes 🗌	No 🛛	
Distance of site to near	est railroad track		(m)	Direction to RR	⊠NA	
Distance of site to near	ant marrian mala milton	ma Campana	(m) 70 Direc	The second contract of the second sec	March 27/2/2	
Distance of site to near Distance between site and			Direction from site		⊠NA	
				torage, stacks, vents, railroa		
ANSWER ALL APPL					520	
Parameters	Monitoring	Objective	Scale	Site Ty	pe	
□NA	☑General/Backg		Micro	✓SLAMS		
SO ₂ (NAAQS) SO ₂ (trace-level)	Highest Conce	ntration	☐Middle	NCORE		
NO _x (NAAQS)	☐Max O3 Conce ☐Population Exp		Neighborhoo			
□HSNO _y	Source Oriente		⊠Urban	SPM/OPN_	<u> </u>	
⊠ O ₃ □ NH ₃	☐Transport	47 B	Regional_	□NONREGULA	TORY	
Hydrocarbon	Upwind Backg		-	→2 (a=3)	Ba - 00	
Air Toxics	☐Welfare Relate	d Impacts				
HSCO (Not Micro)	-					
Probe inlet beight (from a	pround) 2.15 m2 Va	∘□ No□	Give actual me	easured height from ground (m	vatare) 5	
Distance of probe inlet fr	78 C10 C10 E12 E22 E21 E12 E12 E12 E12 E12 E12 E12					
Actual measured distance				100 🔼 110		
Distance of probe inlet fr	om other monitoring p	probe inlets > 1 r	n?	Yes⊠ No	□NA□	
Is probe > 20 m from the	nearest tree drip line?	Yes 🛛 *N	lo 🔲 (answer * d c	questions)	AL TABLETA DARK	
*Is probe > 10 m from th	e nearest tree drip line	if tree acts as ar	obstruction? Ye	es 🗌 *No 🗌		
*Distance from probe to	tree (m)		Directio	on from probe to tree		
*Height of tree (m)	2-12-110-110					
Are there any obstacles to	oair flow? *Yes 🗌 (a	nswer °'d quest	ions) No 🏻			
*Identify obstacle	Distance from probe i	nlet (m)	Direction from pro	be inlet to obstacle		
*Is distance from inlet pr	obe to obstacle at leas	t twice the heigh	t that the obstacle p	protrudes above the probe? Ye	s No	
Distance of probe to near						

BF_2011SITE_REVIEW_FORM2.DOCX

Parameters	Monitoring Objective	Scale	Site Type
⊠ NA □CO (Micro Only)	Highest ConcentrationPopulation ExposureSource OrientedTransportWelfare Related Impacts	Miero	SLAMS SPM_ SPM/OPN NONREGULATORY
Probe inlet height (from gr Actual measured distance	round) 2.5 - 3.5 m? from probe inlet to ground (meters)		Yes No
Distance of probe inlet fro Actual measured distance	m horizontal (wall) and/or vertical (ro from probe to supporting structure (m	of) supporting structure eters)	> 1 m? Yes No
Distance of probe inlet to	nearest intersection > 10 m? nearest traffic lane 2 - 10 m? nearest tree drip line? Yes	o (answer *'d questio	Yes No Yes No No
*Is probe > 10 m from the *Distance from probe to tr	nearest tree drip line if tree acts as an	obstruction? Yes	*No 🗌
*Height of tree (m) Are there any obstacles to	air flow? *Yes [] (answer *'d questi	ons) No 🗍	
*Identify obstacle I	Distance from probe inlet (m)	Direction from probe inle	
	st traffic lane (m)Direction fr		
Parameters	Monitoring Objective	Scale	Site Type
⊠ NA □ NO _y (trace-level)	General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	☐Micro ☐Middle	SLAMS NCORE SPM
Probe inlet height (from gr Actual measured distance			Yes No
2	m horizontal and/or vertical supporting	7)	Yes No
Distance of probe inlet fro	m other monitoring probe inlets > 1 m	1?	Yes No NA
*Is probe > 10 m from the *Distance from probe to tr	nearest tree drip line? Yes - *N nearest tree drip line if tree acts as an ee (m)	obstruction? Yes	
*Identify obstacle I *Is distance from inlet pro	air flow? *Yes (answer *'d questi Distance from probe inlet (m)I be to obstacle at least twice the height st traffic lane (m) Direction	Direction from probe inle that the obstacle protruc	les above the probe? Yes 🗌 No 🗍

BF_2011SITE_REVIEW_FORM2.DOCX

Parameters	Monitoring Objective	Scale	Site Type
☑ NA ☐NO ₂ (Near Road only) ☐CO (Near Road only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	Micro	□SLAMS □SPM □ NONREGULATORY
그 그들이 하다면 하는 것이 하는데 하는데 하는데 하는데 하는데 되었다면 하는데	d) 2-15 m? Yes No		\$10.00 \$10.00 \$1.0
Distance of probe inlet from he	orizontal (wall) and/or vertical (ro	of) supporting structure	>1 m? Yes □ No □
Actual measured distance from	probe to supporting structure (m	eters)	
Distance of probe inlet from of	ther monitoring probe inlets > 1 m	12	Yes 🗌 No 🗌 NA 📗
Is probe > 20 m from the neare	est tree drip line? Yes 🗌 *No	o 🔲 (answer *'d questio	ns)
*Distance from probe to tree () *Height of tree (m)	rest tree drip line if tree acts as an m)	Direction from	"No 🔲 n probe to tree
	low? *Yes 🗌 (answer *'d questio		
	nce from probe inlet (m)Di		
			les above the probe? Yes No
Distance of probe to nearest tra	affic lane (m) Direction	from probe to nearest tra	dfic lane
Parameters	Monitoring Objective	Scale	Site Type
Air flow > 200 L/min	Highest Concentration Population Exposure Source Oriented Background Fransport	MicroMiddleNeighborhoodUrbanRegional	SLAMS NCORE SPM
	d)		> 15 m
Distance of inlet from horizont Actual measured distance from	tal (wall) and/or vertical (platform probe to supporting structure (m	or roof) supporting structers)	cture > 2 m? Yes No
Distance between collocated P	M-10, TSP or Pb sampler inlets =	2 to 4 m?	Yes 🗌 No 🗌 NA 🔲
Actual measured distance betw	reen collocated probes (meters)		
Distance between any high vol	lume inlet and any other high or lo	ow volume inlet ≥2 m?	Yes 🗌 No 🗌 NA 🔲
s probe > 20 m from the neare	est tree drip line? Yes 🔲 "No	o 🗌 (answer *'d questio	ns)
*Distance from probe to tree (i *Height of tree (m)	rest tree drip line if tree acts as an m)	Direction from	*No 🗆
Are there any obstacles to air f	low? *Yes 🗌 (answer *'d questio	ons) No 🔲	
	nce from probe inlet (m)Dir		
			les above the probe? Yes 🗌 No 🛭
Distance of probe to nearest tra	affic lane (m) Direction	from probe to nearest tra	iffic lane

BF_2011SITE_REVIEW_FORM2.DOCX

Parameters	Monitoring Objective	Scale	Site Type
NA	General/Background	Micro	SLAMS
Air flow < 200 L/min	Highest Concentration_	☐Middle	□ NCORE
☐ PM2.5 ☐ PM10	Population Exposure	Neighborhood_	□SPM
☐ PM10-2.5	Source Oriented	□Urban_	NONREGULATORY
PM10 Lead (PB) PM2.5 Cont. (TEOM)	Transport	Regional	
PM2.5 Cont. (BAM)	Upwind Background	9.—30.5000.——————————————————————————————	
PM2.5 Spec. (SASS)	Welfare Related Impacts		
PM2.5 Spec. (URG) PM2.5 Cont. Spec.			
Probe inlet height (from gro Actual measured distance from	und)	7-15 m	> 15 m
	ontal (wall) and/or vertical (platform or		> 2 m? Yes No No
Distance between inlets of a site = 1 m or greater?	ny low volume monitor and any other	low volume monitor at the	Yes No No NA
Distance between all low vo or greater?	lume monitor inlets and any Hi-Volum		Yes No NA
Are collocated PM2.5 Monit TEOM, BAM & TEOM) Lo	tors (Two FRMs, FRM & BAM, FRM scated at Site?	& *Yes □ (answ	ver *'d questions) No 🗌 NA 🗍
*Distance between collocate	ed PM 2.5 sampler inlets = 1 to 4 m?		Give actual (meters)
	pler inlets within 1 m vertically of each	55.00	Give actual (meters)
	llocated with a SASS monitor at the sit ed speciation sampler inlets = 1 to 4 m		uestions) No NA Signature NA Give actual (meters)
	sampler inlets within 1 m vertically of		
Is a low-volume PM10 mon to measure PM10-2.5?	itor collocated with a PM2.5 monitor a	t the site *Yes (answ	ver *'d questions) No 🗌 NA 📗
*Are collocated PM10 and I	od PM10 and PM2.5 inlets for PM10-2. PM2.5 sampler inlets within 1 m vertice arest tree drip line? Yes *No *N	ally of each other?	Yes No
0)	earest tree drip line if tree acts as an ob	7)(2) N (2)	
*Distance from probe to tree	earest tree crip line it tree acts as an oc		
*Height of tree (m)	r flow? *Yes (answer *'d questions	VNIa 🗀	5 2
*Is distance from inlet probe	stance from probe inlet (m)Direction of the height the constant at least twice the height the state of the height	ection from probe injet to or at the obstacle protrudes ab	ove the probe? Yes No
Distance of probe to nearest	traffic lane (m) Direction from	om probe to nearest traffic la	ine
RECOMMENDATIONS:	591 <u>1918</u>		
	atus? Yes ⊠ *No □ (answer *'d		V 31 🖂
	jective? Yes [] (enter new objective) No []-
*4) Relocate site? Yes [sentativeness? Yes ☐ (enter new so	ale) No [
4) Reforate site: Test	_ 140 M		
Comments:			
ReviewerMike Pleasar	nt	D	ateDecember 29, 2011
Ambient Monitoring Coord	linator ELT	-39	DateJanuary 3, 2012
Revised 2012-03-13			
		C. setson	(making)
BF_2011SITE_R	EVIEW_FORM2.DOCX Joette	Steger	go, or the annual policy of special code and an annual and a second an

Site Information

Region_RRO Site Name Butner Street Address_ 800 Central Ave		l A	AQS Site # 37-077 - 0011	
		City But	City Butner	
Urban Area BUTN	NER Core-	based Statistical Ar		
	Enter Exact			
Longitude -78.768		29	Method of Measuring	
In Decimal Degrees	In Decimal Degrees	GPS 1	Explanation: google maps	
	w Mean Sea Level (in meters)		<u>129</u>	
Name of nearest road to	inlet probe West G street to the SE ()	no Traffic Count avail.)	ADTYear	
	losest, CentralAve is closest "main" r		_	
	t major road (m) 180.00 Direction f			
	oad Central Avenue		-	
Comments: Interstae I-8	5 (exit 189) is 1.9 miles SE of site, A	DT (2009) = 31,500		
Site located near electrica	al substation/high voltage power line	s?	Yes □ No ⊠	
Distance of site to near	est railroad track	(m) 1875	Direction to RR NE NA	
		0.545.000.000		
	est power pole w/transformer d drip line of water tower (m)	(m) 58 Direction Direction from site to		
			age, stacks, vents, railroad tracks,	
	fast food restaurants, and swimm		age, stacks, veitts, fairfoad tracks,	
[NaOH, Anhyd.Ammonia, Alum.	
Marca IIII Maria	Addit Has taking of Brake	LOLI LINGSPINATEL	COURT THINK STREET, THE SHIPE	
	ACABLE QUESTIONS:			
Parameters	Monitoring Objective	Scale	Site Type	
□NA	General/Background	Micro	SLAMS	
SO ₂ (NAAQS)	☐ Highest Concentration	□Middle	1774 C C C T C 2017 # 2 20 C C C C C C C C C C C C C C C C C	
SO ₂ (trace-level) NO _x (NAAQS)	Max O3 Concentration	Neighborhood	The state of the s	
HSNO,	Population Exposure Source Oriented	□Urban		
⊠ O₃ ″	Transport	Regional	□NONREGULATORY_	
□ NH ₃	Upwind Background		NONREGULATORI	
Hydrocarbon Air Toxics	Welfare Related Impacts			
HSCO (Not Micro	·	1		
CO (trace-level)	2			
Probe inlet height (from	ground) 2-15 m? Yes ⊠ No □	Give actual meas	ured height from ground (meters) 3.70	
	rom horizontal (wall) and/or vertical		ire≥1 m? Yes⊠ No 🗌	
	e from probe to supporting structure			
Distance of probe inlet for	rom other monitoring probe inlets > 1 e nearest tree drip line? Yes 🔀 '	m?	Yes No NA	
	ne nearest tree drip line if tree acts as			
*Distance from probe to	tree (m)	Direction f	from probe to tree	
*Height of tree (m)				
	o air flow? *Yes 🗌 (answer *'d que			
	Distance from probe inlet (m)		5. O.	
			trudes above the probe? Yes 🔲 No 🔲	
Distance of probe to nea	rest traffic lane (m) 180 Direction	from probe to nearest tr	affic lane NE	

BT_2011SITEREVIEW_FORM2.DOCX

Parameters	Monitoring Objective	Scale	Site Type
⊠ NA □CO (Micro Only)	Highest ConcentrationPopulation ExposureSource OrientedTransportWelfare Related Impacts	Miero	□SLAMS □SPM_ □SPM/OPN_ □ NONREGULATORY
Probe inlet height (from gr Actual measured distance	round) 2.5 - 3.5 m? from probe inlet to ground (meters)		Yes No
Distance of probe inlet fro Actual measured distance	m horizontal (wall) and/or vertical (ro from probe to supporting structure (m	of) supporting structure eters)	> 1 m? Yes No
Distance of probe inlet to	nearest intersection > 10 m? nearest traffic lane 2 - 10 m? nearest tree drip line? Yes	o [] (answer *'d questio	Yes No Yes No No
*Is probe > 10 m from the *Distance from probe to tr	nearest tree drip line if tree acts as an	obstruction? Yes	*No 🗌
*Height of tree (m) Are there any obstacles to	air flow? *Yes [(answer *'d questi	ons) No 🗍	
*Identify obstacle I	Distance from probe inlet (m)I be to obstacle at least twice the height	Direction from probe inle	
	st traffic lane (m)Direction fr		
Parameters	Monitoring Objective	Scale	Site Type
⊠ NA □ NO _y (trace-level)	General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	☐Micro ☐Middle	SLAMS NCORE SPM
Probe inlet height (from gr Actual measured distance			Yes No
2	m horizontal and/or vertical supporting	7)	Yes No
Distance of probe inlet fro	m other monitoring probe inlets > 1 m	1?	Yes No NA
*Is probe > 10 m from the *Distance from probe to tr	nearest tree drip line? Yes - *N nearest tree drip line if tree acts as an ree (m)	obstruction? Yes	
*Identify obstacle I *Is distance from inlet pro	air flow? *Yes (answer *'d questi Distance from probe inlet (m)I be to obstacle at least twice the height st traffic lane (m) Direction	Direction from probe inle that the obstacle protruc	les above the probe? Yes 🔲 No 🔲

Parameters	Monitoring Objective	Scale	Site Type
☑ NA ☐NO ₂ (Near Road only) ☐CO (Near Road only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	Micro	□SLAMS □SPM □ NONREGULATORY
그 그들이 하다면 하는 것이 하는데 하는데 하는데 하는데 하는데 되었다면 하는데	d) 2-15 m? Yes No		0.00 f (200.00 f 1.00 f
Distance of probe inlet from he	orizontal (wall) and/or vertical (ro	of) supporting structure	>1 m? Yes □ No □
Actual measured distance from	probe to supporting structure (m	eters)	
Distance of probe inlet from of	ther monitoring probe inlets > 1 m	2	Yes 🔲 No 🗌 NA 📗
Is probe > 20 m from the neare	est tree drip line? Yes 🗌 *No	o 🔲 (answer *'d questio	ns)
*Distance from probe to tree () *Height of tree (m)	rest tree drip line if tree acts as an m)	Direction from	"No n probe to tree
	low? *Yes 🗌 (answer *'d questio		
	nce from probe inlet (m)Di		
			les above the probe? Yes No
Distance of probe to nearest tra	affic lane (m) Direction	from probe to nearest tra	iffic lane
Parameters	Monitoring Objective	Scale	Site Type
Air flow > 200 L/min	Highest Concentration Population Exposure Source Oriented Background Fransport	MicroMiddle	SLAMS NCORE SPM
	d)		> 15 m
Distance of inlet from horizont Actual measured distance from	tal (wall) and/or vertical (platform probe to supporting structure (m	or roof) supporting structures)	cture > 2 m? Yes No
Distance between collocated P	M-10, TSP or Pb sampler inlets =	2 to 4 m?	Yes 🗌 No 🗌 NA 🔲
Actual measured distance betw	reen collocated probes (meters)		
Distance between any high vol	lume inlet and any other high or lo	ow volume inlet ≥ 2 m?	Yes 🗌 No 🗌 NA 🔲
s probe > 20 m from the neare	est tree drip line? Yes 🔲 "No	o [] (answer *'d questio	ns)
*Distance from probe to tree (i *Height of tree (m)	rest tree drip line if tree acts as an m)	Direction from	*No 🗆
Are there any obstacles to air f	low? *Yes 🗌 (answer *'d questio	ons) No 🔲	
	nce from probe inlet (m)Dir		
			es above the probe? Yes 🗌 No 🛭
Distance of probe to nearest tra	affic lane (m) Direction	from probe to nearest tra	iffic lane

Parameters	Monitoring Objective	Scale	Site Type
NA	General/Background	☐Micro	SLAMS
Air flow < 200 L/min	Highest Concentration_	Middle	□ NCORE
☐ PM2.5 ☐ PM10	Population Exposure	Neighborhood	SPM
PM10-2.5	Source Oriented	□Urban	NONREGULATORY
PM10 Lead (PB)	Transport	Regional	-
☐ PM2.5 Cont. (TEOM) ☐ PM2.5 Cont. (BAM)	Upwind Background		
PM2.5 Spec. (SASS)	Welfare Related Impacts		
PM2.5 Spec. (URG)			
PM2.5 Cont. Spec.			
Actual measured distance from	und)	7-15 m	□ > 15 m
	ontal (wall) and/or vertical (platform or		2 m? Yes No
Distance between inlets of a site = 1 m or greater?	ny low volume monitor and any other!	ow volume monitor at the	Yes No NA NA
	lume monitor inlets and any Hi-Volum	e PM-10 or TSP inlet = 2 m	Yes □ No □ NA □
or greater?	(T PD) (. PD) (P. D) (PD) (е Т	Tes Li No Li MALL
TEOM, BAM & TEOM) Lo	tors (Two FRMs, FRM & BAM, FRM cated at Site?	° i es ∐ (answ	er **d questions) No 🗌 NA 🗍
	od PM 2.5 sampler inlets = 1 to 4 m? pler inlets within 1 m vertically of each		Give actual (meters)
	llocated with a SASS monitor at the sit		uestions) No 🗌 NA 📗
	ed speciation sampler inlets = 1 to 4 m		Give actual (meters) Give actual (meters)
	sampler inlets within 1 m vertically of		
Is a low-volume PM10 mon to measure PM10-2.5?	itor collocated with a PM2.5 monitor a	the site Yes [(answ	er *'d questions) No 🗌 NA 📗
*Distance between collocate	ed PM10 and PM2.5 inlets for PM10-2.	5 samplers = 1 to 4 m?	Yes No No
	M2.5 sampler inlets within 1 m vertice		í es 🗌 No 🗌
	arest tree drip line? Yes 🗌 *No 🛭		_
*Is probe > 10 m from the n *Distance from probe to tree	earest tree drip line if tree acts as an ob	struction? Yes — *No [— Direction from prob	
*Height of tree (m)			
Are there any obstacles to ai	r flow? *Yes 🗌 (answer *'d questions) No 🔲	
*Identify obstacle Dis	stance from probe inlet (m)Direction	ection from probe inlet to ob	stacle
*Is distance from inlet probe Distance of probe to pearest	to obstacle at least twice the height the traffic lane (m) Direction from	at the obstacle protrudes about the probe to pearest traffic la	ve the probe? Yes No
RECOMMENDATIONS:	danie late (iii) Disceton ne	an proce to reasest darrie ta	
	atus? Yes X *No ☐ (answer *'d	questions)	
	jective? Yes [(enter new objective) No 🗀-
	sentativeness? Yes [(enter new so	707) No 🗆
*4) Relocate site? Yes [□ No□		
Comments:			19
Reviewer	TTS		DateJanuary 4, 2012
Ambient Monitoring Coord	dinator ELT		DateJanuary 4, 2012
Revised 2012-03-13			
DT 2011STWEED	VIEW FORMS DOCY lootto S		The second section of the second section secti

Site Information

Region_RRO Site Name FF		AQ	AQS Site # 37- 183 - 0020				
Street Address 3720 Lake Wheeler Rd		City Ral	eigh_	Section 1975			
Urban Area	RALEIG	H		Core-based	Statistical Are	a Raleigh-	Cary, NC
		Enter Ex	act		3		
	-W 078.68		Latitude	N 35.72880		Method of	Measuring
In Decimal Degre	200		In Decimal D	-	GPS E		Google Maps
Elevation Abov				ers)			32
Name of nearest			rood Rd		AD'	T 200 Year	2007
Comments:			-				
					te to nearest major		
Name of nearest	major road	Lake Whe	eler Rd.		ADT 13000	Year <u>2007</u>	
Comments:							
Site located near	electrical s	ubstation/hi	gh voltage pov	wer lines?			Yes 🔲 No 🛛
Distance of site	to nearest	railroad tr	ack	1	(m) 900 Direction	to RR E	□NA
					O-34 - 3-11-11-11-11-11-11-11-11-11-11-11-11-11	Carlo source and an arrange	
Distance of site Distance betweer					(m) 300 I ction from site to w	Direction N	⊠NA
							ents, railroad tracks,
ANSWER AL	- 1						
Paramete	rs	Mon	itoring Objec	tive	Scale	_	Site Type
⊠NA	2020		l/Background_		Micro	□SL	AMS
SO ₂ (NAA SO ₂ (trace-			Concentratio]Middle		ORE
NO _x (NA			3 Concentration tion Exposure		Neighborhood	SPi	M
☐HSNO _y			Oriented		Urban	_ SP	M/OPN
□ O ₃ □ NH ₃		Transp	ort	_ Ir	Regional	□NO	NREGULATORY
Hydrocarb	on		Background			37=33	5V 0
Air Toxics		Welfar	e Related Impa	acts			
HSCO (No				_			
CO (trace- Probe inlet heigh		and) 2-15 n	2 Yes	No.	Give actual measur	red height from	n ground (meters)
					supporting structure		es No
Actual measured							
Distance of prob	e inlet from	other mon	toring probe i	nlets > 1 m?	70e274 955		es 🗌 No 🗌 NA 🗌
Is probe > 20 m	from the ne	arest tree dr	ip line? Yes	s 🗌 "No 🗀	answer *'d quest	ions)	
*Is probe > 10 m	from the n	earest tree	drip line if tree	acts as an ob	struction? Yes	*No 🗌	
*Distance from p	probe to tree	e (m)			Direction fro	om probe to tr	ee
*Height of tree (
Are there any ob	stacles to a	ir flow? *Y	es 🗌 (answer	e'd questions	No 🗌		
*Identify obstacl	e Di	stance from	probe inlet (n	n)Dire	ction from probe in	let to obstacle	_
*Is distance from	inlet probe	e to obstacle					e probe? Yes 🗌 No 🗀
Distance of prob	e to nearest	traffic lane	(m)	Direction fro	m probe to nearest t	traffic lane	-00

FF_2011SITE_REVIEW_FORM2.DOCX

Parameters	Monitoring Objective	Scale	Site Type
⊠ NA □CO (Micro Only)	Highest ConcentrationPopulation ExposureSource OrientedTransportWelfare Related Impacts	Miero	SLAMS SPM_ SPM/OPN NONREGULATORY
Probe inlet height (from gr Actual measured distance	round) 2.5 - 3.5 m? from probe inlet to ground (meters)		Yes No
Distance of probe inlet fro Actual measured distance	m horizontal (wall) and/or vertical (ro from probe to supporting structure (m	of) supporting structure eters)	> 1 m? Yes No
Distance of probe inlet to	nearest intersection > 10 m? nearest traffic lane 2 - 10 m? nearest tree drip line? Yes	o [] (answer *'d questio	Yes No Yes No No
*Is probe > 10 m from the *Distance from probe to tr	nearest tree drip line if tree acts as an	obstruction? Yes	*No 🗆
*Height of tree (m) Are there any obstacles to	air flow? *Yes [] (answer *'d question	ons) No	
*Identify obstacle I *Is distance from inlet pro	Distance from probe inlet (m)I be to obstacle at least twice the height	Direction from probe inle that the obstacle protruc	des above the probe? Yes 🔲 No 🔲
Distance of probe to neare	st traffic lane (m)Direction fr	om probe to nearest traft	fic lane
Parameters	Monitoring Objective	Scale	Site Type
⊠ NA □ NO _y (trace-level)	General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	AND THE RESIDENCE OF THE REAL PROPERTY.	NCORE
Probe inlet height (from gr Actual measured distance		<u></u>	Yes No
2	m horizontal and/or vertical supporting from probe to supporting structure (m	7).	Yes No
Distance of probe inlet fro	m other monitoring probe inlets > 1 m	17.	Yes No NA
*Is probe > 10 m from the *Distance from probe to tr	nearest tree drip line? Yes - *Ne nearest tree drip line if tree acts as an ee (m)	obstruction? Yes	
*Identify obstacle I *Is distance from inlet pro	air flow? *Yes (answer *'d question Distance from probe inlet (m)I be to obstacle at least twice the height st traffic lane (m) Direction	Direction from probe inle that the obstacle protruc	des above the probe? Yes 🗌 No 🗍

FF_2011SITE_REVIEW_FORM2.DOCX

Parameters	Monitoring Objective	Scale	Site Type
NA NO₂ (Near Road only) CO (Near Road only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	Micro	SLAMS SPM NONREGULATORY
Probe inlet height (from groun	nd) 2-15 m? Yes No	Give actual measured	height from ground (meters)
Distance of probe inlet from h	orizontal (wall) and/or vertical (ro	of) supporting structure >	· 1 m? Yes □ No □
Actual measured distance from	r probe to supporting structure (me	eters)	
	ther monitoring probe inlets > 1 m		Yes No No NA
Is probe > 20 m from the near	est tree drip line? Yes 🔲 *No	(answer *'d question	ns)
*Distance from probe to tree (*Height of tree (m)	rest tree drip line if tree acts as an m) flow? *Yes (answer *'d questic	Direction from	"No 🔲 probe to tree
	ince from probe inlet (m)Dir		N 5 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
			es above the probe? Yes No
Distance of probe to nearest tr	affic lane (m) Direction	from probe to nearest trai	Iffic lane
Parameters	Monitoring Objective	Scale	Site Type
Air flow > 200 L/min	Highest Concentration Population Exposure Source Oriented Background Transport	MicroMiddleNeighborhoodUrban	SLAMS NCORE SPM
	d)		> 15 m
Distance of inlet from horizon Actual measured distance from	tal (wall) and/or vertical (platform n probe to supporting structure (me	or roof) supporting structers)	eture > 2 m? Yes No No
Distance between collocated P	M-10, TSP or Pb sampler inlets =	2 to 4 m?	Yes No NA
	veen collocated probes (meters)		
	lume inlet and any other high or lo	- Allinoi - Merit Attorios - Att	Yes No NA
Is probe > 20 m from the near	est tree drip line? Yes 🔲 "No	answer *'d question	ns)
*Distance from probe to tree (*Height of tree (m)	rest tree drip line if tree acts as an	Direction from	
Are there any obstacles to air	flow? *Yes 🗌 (answer *'d questio	ons) No 🔲	
*Identify obstacle Dista	nnce from probe inlet (m)Dire	ection from probe inlet to	obstacle
			es above the probe? Yes 🗌 No 🔲
	affic lane (m) Direction		

NA Air flow 200 L/min General/Background Misro Misro M	Parameters	Monitoring Objective	Scale	Site Type
Middle SPAL2 SPAL10 Sexure Oriented Sexure Oriented Transport Sexure Oriented Se	□NA	Ganaral/Background	□Mioro.	⊠SLAMS
PATIO	Air flow < 200 L/min		202 D.C. (010 127 127	□ NCORE
PAfl Dead (PB) PAfl Secont. (TEOM) PAfl Secont. (BAM) Divide Background Welfare Related Impacts PAfl Secont. (BAM) PAfl Secont. (BAM) PAfl Secont. (BAM) Welfare Related Impacts PAfl Secont. (BAM)	Second Control of the	2100 - 27 - C		
PAL2 S Cont. (FIGM)		TAKEN 11 25 T. S.		■ NONREGULATORY
PN2.5 Sonc. (BAM)			17 (man 17 (man 17 (man 17 man	
PM2.5 Spec. (JRKg)		Iransport	Regional	155 193
PM2.5 Spec. (IRG)		0.00 p = 3.000 p = 5.000 kg/s		
Probe inlet height (from ground)		Welfare Related Impacts		
Actual measured distance from probe inlet to ground (meters) 25	PM2.5 Cont. Spec.	1941		
Distance between inlets of any low volume monitor and any other low volume monitor at the site ~ 1 m or greater? Distance between all low volume monitor inlets and any Hi-Volume PM-10 or TSP inlet = 2 m or greater? Are collocated PM2.5 Monitors (Two FRMs, FRM & BAM, FRM & TEOM, BAM & TEOM, Decated at Site? **Poistance between collocated PM2.5 sampler inlets = 1 to 4 m? **Pare collocated PM2.5 sampler inlets within 1 m vertically of each other? **Poistance between collocated with a SASS monitor at the site? **Poistance between collocated with a SASS monitor at the site? **Poistance between collocated speciation sampler inlets = 1 to 4 m? **Poistance between collocated with a PM2.5 monitor at the site? **Poistance between collocated with a PM2.5 monitor at the site? **Poistance between collocated PM10 monitor collocated with a PM2.5 monitor at the site of PM10-2.5 monitor a	Actual measured distance from	om probe inlet to ground (meters) <u>2</u>	5	CHILDREN AND COME WITH A SECOND COM
site = 1 m or greater? Distance between all low volume monitor inlets and any Hi-Volume PM-10 or TSP inlet = 2 m or greater? Are collocated PM_2.5 Monitors (Two FRMs, FRM & BAM, FRM & BAM, FRM & PEOM) Located at Site? **Distance between collocated PM_2.5 sampler inlets within 1 m vertically of each other? **Post and URG 3000 monitor collocated with a SASS monitor at the site? **Post and between collocated speciation sampler inlets = 1 to 4 m? **Post and between collocated speciation sampler inlets = 1 to 4 m? **Post and between collocated speciation sampler inlets = 1 to 4 m? **Post and between collocated speciation sampler inlets = 1 to 4 m? **Post and between collocated speciation sampler inlets = 1 to 4 m? **Post and between collocated with a PM2.5 monitor at the site omeasure PM10-2.5? **Distance between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? **Post and bet				
Are collocated PM2.5 Monitors (Two FRMs, FRM & BAM, FRM & TEOM) Located at Site? *Poistance between collocated PM2.5 sampler inlets = 1 to 4 m? *Are collocated PM2.5 sampler inlets within 1 m vertically of each other? *Is an URG 3000 monitor collocated with a SASS monitor at the site? *Distance between collocated speciation sampler inlets = 1 to 4 m? *Distance between collocated speciation sampler inlets = 1 to 4 m? *Are collocated speciation sampler inlets within 1 m vertically of each other? *Are collocated speciation sampler inlets within 1 m vertically of each other? *Distance between collocated with a PM2.5 menitor at the site one assure PM10-2.5? *Distance between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? *Are collocated PM10 and PM2.5 sampler inlets within 1 m vertically of each other? *Distance between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? *Are collocated PM10 and PM2.5 sampler inlets within 1 m vertically of each other? *Is probe > 20 m from the nearest tree drip line? Yes who (answer *'d questions) *Is probe > 10 m from the nearest tree drip line if tree acts as an obstruction? *Is probe > 10 m from the nearest tree drip line if tree acts as an obstruction? *Is probe > 10 m from the nearest tree drip line if tree acts as an obstruction? *Is gistance from probe to tree (m)	site = 1 m or greater?			ies L No L NA M
TEOM, BAM & TEOM) Located at Site? *Distance between collocated PM 2.5 sampler inlets = 1 to 4 m? *Are collocated PM 2.5 sampler inlets within 1 m vertically of each other? Is an URG 3000 monitor collocated with a SASS monitor at the site? *Yes	or greater?			m Yes□ No□ NA□
*Pistance between collocated PM 2.5 sampler inlets = 1 to 4 m?			*Yes ☐ (ans	wer *'d questions) No 🛛 NA 🗌
Is an URG 3000 monitor collocated with a SASS monitor at the site? "Yes (answer *"d questions) No NA * Distance between collocated speciation sampler inlets = 1 to 4 m? Yes No Give actual (meters) * Are collocated speciation sampler inlets within 1 m vertically of each other? Yes No Give actual (meters) Is a low-volume PM10 monitor collocated with a PM2.5 monitor at the site of measure PM10-2.5? * Postance between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? Yes No * Are collocated PM10 and PM2.5 sampler inlets within 1 m vertically of each other? Yes No * Are collocated PM10 and PM2.5 sampler inlets within 1 m vertically of each other? Yes No * Postance from probe to tree drip line? Yes No (answer *"d questions) * Is probe > 20 m from the nearest tree drip line if tree acts as an obstruction? Yes No * Ploistance from probe to tree (m) Direction from probe to tree (m) Are there any obstacles to air flow? *Yes (answer *"d questions) No * Identify obstacle Distance from probe inlet (m) Direction from probe inlet to obstacle * Identify obstacle Distance from probe inlet (m) Direction from probe to nearest traffic lane BECOMMENDATIONS: 1) Maintain current site status? Yes *No (answer *"d questions) * 2) Change monitoring objective? Yes (enter new objective No No ** * 3) Change scale of representativeness? Yes (enter new scale No No ** * 4) Relocate site? Yes No Date_December 29, 2011 Ambient Monitoring Coordinator ELT Date_January 3, 2012 Revised 2012-03-13	*Distance between collocate	ed PM 2.5 sampler inlets = 1 to 4 m?		
* Distance between collocated speciation sampler inlets = 1 to 4 m? Yes No Give actual (meters) * Are collocated speciation sampler inlets within 1 m vertically of each other? Yes No Give actual (meters) Is a low-volume PM10 monitor collocated with a PM2.5 monitor at the site to measure PM10-2.5? *Distance between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? Yes No Share collocated PM10 and PM2.5 sampler inlets within 1 m vertically of each other? Yes No Share collocated PM10 and PM2.5 sampler inlets within 1 m vertically of each other? Yes No Share PM10 problem No No Share proble > 20 m from the nearest tree drip line? Yes Show Show Canswer of questions) *Is probe > 10 m from the nearest tree drip line if tree acts as an obstruction? Yes Show Direction from probe to tree She problem No Share PM10 of tree (m) Are there any obstacles to air flow? *Yes (answer of questions) No Share PM2 is distance from inlet probe to obstacle at least twice the height that the obstacle protrudes above the probe? Yes No Distance of probe to nearest traffic lane (m) Direction from probe to nearest traffic lane PM2 (answer of questions) *2 Change monitoring objective? Yes (enter new objective No Share PM3) Change scale of representativeness? Yes (enter new objective No Share PM3) Change scale of representativeness? Yes (enter new objective No Share PM3) Change scale of representativeness? Yes (enter new scale No Share PM3) No Amaintain corrent site status? Yes (enter new objective No Share PM3) Change scale of representativeness? Yes (enter new scale No Share PM3) No Share PM3 (answer Protrudes above the probe? Yes No Share PM3) Change scale of representativeness? Yes (enter new objective No Share PM3) No Share PM3 (answer Protrudes above the probe? Yes No Share PM3 (answer Protrudes above the probe? Yes No Share PM3 (answer Protrudes above the probe? Yes No Share PM3 (answer Protrudes above the probe? Yes No Share PM3 (answer Protrudes above the probe? Yes No Share PM3 (answer Protrudes Above the protrud	*Are collocated PM2.5 samp	pler inlets within 1 m vertically of each	n other? Yes No	Give actual (meters)
*Are collocated speciation sampler inlets within 1 m vertically of each other? Yes No Give actual (meters) Is a low-volume PM10 monitor collocated with a PM2.5 monitor at the site to measure PM10-2.5? *Poistance between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? Yes No Sampler inlets within 1 m vertically of each other? Yes No Sampler inlets within 1 m vertically of				
Is a low-volume PM10 monitor collocated with a PM2.5 monitor at the site to measure PM10-2.5? *Distance between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? Yes No No No No No No No No No N				
**To measure PM10-2.5? **Distance between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m?				
*Are collocated PM10 and PM2.5 sampler inlets within 1 m vertically of each other? Yes No Is probe > 20 m from the nearest tree drip line? Yes %No (answer o'd questions) *Is probe > 10 m from the nearest tree drip line if tree acts as an obstruction? Yes %No Are there only probe to tree (m) Sistance from probe to tree (m) Direction from probe to tree %Height of tree (m) Are there any obstacles to air flow? *Yes (answer o'd questions) No Are there any obstacles to air flow? *Yes (answer o'd questions) No Sistance from inlet probe to obstacle at least twice the height that the obstacle protrudes above the probe? Yes No Distance of probe to nearest traffic lane (m) Direction from probe to nearest traffic lane **RECOMMENDATIONS:** 1) Maintain current site status? Yes %No (answer o'd questions) *2) Change monitoring objective? Yes (enter new objective No **A) Relocate site? Yes No **A) Relocate site? Yes No **A) No **A) Relocate site? Yes No **A) No **A) Relocate site? Yes No **A) DateDecember 29, 2011 Ambient Monitoring Coordinator **ELT** DateJanuary 3, 2012		not conocated with a FIVI2.5 mornior a	it tile site Tes [] (alis	wer a questions) No M NA []
*Are collocated PM10 and PM2.5 sampler inlets within 1 m vertically of each other? Yes No Is probe > 20 m from the nearest tree drip line? Yes %No (answer *'d questions) *Is probe > 10 m from the nearest tree drip line if tree acts as an obstruction? Yes %No Are there only probe to tree (m) Direction from probe to tree Meight of tree (m) Are there any obstacles to air flow? *Yes (answer *'d questions) No Are there any obstacles to air flow? *Yes (answer *'d questions) No Direction from probe inlet to obstacle is allowed in the probe to obstacle at least twice the height that the obstacle protrudes above the probe? Yes No Distance of probe to nearest traffic lane (m) Direction from probe to nearest traffic lane NecOMMENDATIONS: 1) Maintain current site status? Yes %No (answer *'d questions) *2) Change monitoring objective? Yes (enter new objective No **) No ** *4) Relocate site? Yes No ** Comments: Reviewer Mike Pleasant DateDecember 29, 2011 Ambient Monitoring Coordinator ELT DateJanuary 3, 2012 Revised 2012-03-13	*Distance between collocate	ed PM10 and PM2.5 inlets for PM10-2	5 samplers = 1 to 4 m?	Yes No No
*Is probe > 10 m from the nearest tree drip line if tree acts as an obstruction? Yes *No *Direction from probe to tree (m) Direction from probe to tree *Height of tree (m) Direction from probe to tree *Height of tree (m) Direction from probe to tree *Height of tree (m) Direction from probe inlet to obstacle at the theight of tree any obstacles to air flow? *Yes (answer *'d questions) No *Identify obstacle Distance from probe inlet (m) Direction from probe inlet to obstacle *Identify obstacle from inlet probe to obstacle at least twice the height that the obstacle protrudes above the probe? Yes No	*Are collocated PM10 and I	PM2.5 sampler inlets within 1 m vertic	ally of each other?	
*Distance from probe to tree (m)			7(개) N (2)	
*Height of tree (m) Are there any obstacles to air flow? *Yes \(\) (answer *'d questions) No \(\) *Identify obstacle \(\) Distance from probe inlet (m) \(\) Direction from probe inlet to obstacle \(\) *Is distance from inlet probe to obstacle at least twice the height that the obstacle protrudes above the probe? Yes \(\) No \(\) Distance of probe to nearest traffic lane (m) \(\) Direction from probe to nearest traffic lane \(\) RECOMMENDATIONS: 1) Maintain current site status? Yes \(\) *No \(\) (answer *'d questions) *2) Change monitoring objective? Yes \(\) (enter new objective \(\) No \(\) *3) Change scale of representativeness? Yes \(\) (enter new scale \(\) No \(\) *4) Relocate site? Yes \(\) No \(\) Comments: Reviewer \(\) Mike Pleasant \(\) Date December 29, 2011 Ambient Monitoring Coordinator \(\) ELT \(\) Date January 3, 2012	*Is probe > 10 m from the n	earest tree drip line if tree acts as an ob	ostruction? Yes *No) <u> </u>
Are there any obstacles to air flow? *Yes \[\] (answer *'d questions) No \[\] *Identify obstacle \[Distance from probe inlet (m) \[Direction from probe inlet to obstacle \[*Is distance from inlet probe to obstacle at least twice the height that the obstacle protrudes above the probe? Yes \[No \] Distance of probe to nearest traffic lane (m) \[Direction from probe to nearest traffic lane \[No \] RECOMMENDATIONS: 1) Maintain current site status? Yes \[*No \[(answer *'d questions) \] *2) Change monitoring objective? Yes \[(enter new objective \[) No \[] \] *3) Change scale of representativeness? Yes \[(enter new scale \[) No \[] \] *4) Relocate site? Yes \[No \[] \] Comments: Reviewer \[Mike Pleasant \] DateDecember 29, 2011 Ambient Monitoring Coordinator \[ELT \] DateJanuary 3, 2012		:(m)	Direction from pro	one to tree
*Is distance from inlet probe to obstacle at least twice the height that the obstacle protrudes above the probe? Yes No Distance of probe to nearest traffic lane (m) Direction from probe to nearest traffic lane RECOMMENDATIONS: 1) Maintain current site status? Yes *No (answer *'d questions) *2) Change monitoring objective? Yes (enter new objective) No - *3) Change scale of representativeness? Yes (enter new scale) No * *4) Relocate site? Yes No * Comments: Reviewer Mike Pleasant DateDecember 29, 2011 Ambient Monitoring Coordinator ELT DateJanuary 3, 2012 Revised 2012-03-13		r flow? *Yes 🔲 (answer *'d question	s) No 🛚	
*Is distance from inlet probe to obstacle at least twice the height that the obstacle protrudes above the probe? Yes No Distance of probe to nearest traffic lane (m) Direction from probe to nearest traffic lane RECOMMENDATIONS: 1) Maintain current site status? Yes *No (answer *'d questions) *2) Change monitoring objective? Yes (enter new objective) No - *3) Change scale of representativeness? Yes (enter new scale) No * *4) Relocate site? Yes No * Comments: Reviewer Mike Pleasant DateDecember 29, 2011 Ambient Monitoring Coordinator ELT DateJanuary 3, 2012 Revised 2012-03-13	*Identify obstacle Dis	stance from probe inlet (m)Dir	ection from probe inlet to	obstacle
RECOMMENDATIONS: 1) Maintain current site status? Yes Solutions *No (answer *'d questions) *2) Change monitoring objective? Yes (enter new objective) No	*Is distance from inlet probe	to obstacle at least twice the height th	at the obstacle protrudes a	bove the probe? Yes 🗌 No 🗌
1) Maintain current site status? Yes A *No (answer *'d questions) *2) Change monitoring objective? Yes (enter new objective) No (- International Contractions of the Contraction of	traffic lane (m) Direction from	om probe to nearest traffic	lane
*2) Change monitoring objective? Yes (enter new objective) No (-*3) Change scale of representativeness? Yes (enter new scale) No (-*4) Relocate site? Yes No (**Enter No **Enter No **En		9	and the second s	
*3) Change scale of representativeness? Yes [(enter new scale		99975 1		
*4) Relocate site? Yes No Comments: Reviewer Mike Pleasant DateDecember 29, 2011 Ambient Monitoring Coordinator ELT DateJanuary 3, 2012 Revised 2012-03-13				
Comments: Reviewer Mike Pleasant Date December 29, 2011 Ambient Monitoring Coordinator ELT DateJanuary 3, 2012 Revised 2012-03-13			cale) No [_
Reviewer Mike Pleasant DateDecember 29, 2011 Ambient Monitoring Coordinator ELT DateJanuary 3, 2012 Revised 2012-03-13	*4) Kelocate site? Yes [☐ N0 🛛		
Ambient Monitoring Coordinator ELT DateJanuary 3, 2012 Revised 2012-03-13	Comments:			
Revised 2012-03-13	Reviewer Mike Pleasant		I	Date December 29, 2011
	Ambient Monitoring Coord	dinator ELT	-	DateJanuary 3, 2012
THE COLUMN TO THE POPULA DOCUME LOCATE CHARGE	Revised 2012-03-13			
THE COLUMN THE PROPERTY PORTS CLOSES				
	m	norma nontro nome locate	Store	Alphora bage

Site Information

Region RRO Site Name West Johnston		on AQS	AQS Site # 37-101 - 0002		
Street Addre	Street Address: 1338 Jack Road		City Clayton		
Urban Area	CLAYTON	Core-ba	sed Statistical Area R	taleigh-Cary, NC	
	Enter	Exact			
	78.4622	Latitude 35.59095	Me	ethod of Measuring	
In Decimal Degree		In Decimal Degrees	Other (explain	Explanation: Google Maps	
		Sea Level (in meters)		127	
Name of nearest re	oad to inlet prob	e <u>Jack Road (SR 1557)</u> A	DT <u>1600</u> Year latest avail	lable <u>2009</u>	
Comments:		-			
			n from site to nearest major		
Name of nearest n	najor road <u>USI</u>	Hwy 70 Bypass ADT 260	000 Year latest available <u>20</u>	<u>10</u>	
Comments:					
Site located near e	lectrical substat	ion/high voltage power lin	nes?	Yes □ No 🏻	
Distance of site	to nearest railro	oad track	(m)Direct	tion to RR NA	
			100000	Distriction of the Control of the Co	
		er pole w/transformer e of water tower (m)	Direction from site to w		
				ge, stacks, vents, railroad tracks,	
		d restaurants, and swim		Se, Starks, Vello, Iulioud duris,	
<u>ht</u>	2330 11860 130 5010				
And the second second second		000-34-1500(A.ARE-90A.E			
		E QUESTIONS:			
Parameter	s	Monitoring Objective	Scale	Site Type	
□NA		eneral/Background	Micro	⊠SLAMS	
□ SO₂ (NAAC		ighest Concentration	_ □Middle		
SO ₂ (trace-l NO _x (NAA	OFF LIN	fax O3 Concentration	■ Neighborhood	The state of the s	
☐HSNO _v		opulation Exposure ource Oriented	Urban		
⊠ o,		ransport	Regional	□NONREGULATORY	
☐ NH ₃	Mr.	pwind Background			
☐ Hydrocarbo ☐ Air Toxics		Velfare Related Impacts	× 1		
HSCO (Not	Micro)	Pr Pr	-		
CO (trace-le					
Probe inlet height	(from ground)	2-15 m? Yes 🛛 No 🗆	Give actual measur	ed height from ground (meters) 3.44	
			d (roof) supporting structure	e>1 m? Yes⊠ No□	
		obe to supporting structur			
Distance of probe	inlet from other	monitoring probe inlets	*1 m? *No (answer *'d quest:	Yes No NA	
		_			
			is an obstruction? Yes		
*Distance from pr		:	Direction fro	om probe to tree	
*Height of tree (n		0 #W D (97.1	and Marketine VAT-		
and the second second second second		v? *Yes ☐ (answer *'d qu		MANAGEMENT CONTROL OF THE CONTROL OF	
			Direction from probe in		
				ades above the probe? Yes No	
Distance of probe	to nearest traffi	c lane (m) 19 Direction	from probe to nearest traff	ic lane <u>SW</u>	

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Parameters	Monitoring Objective	Scale	Site Type			
NA □CO (Micro Only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	Micro	□SLAMS □SPM_□ □SPM/OPN_□ □NONREGULATORY			
Probe inlet height (from g Actual measured distance	ground) 2.5 - 3.5 m? from probe inlet to ground (meters)		Yes □ No □			
Distance of probe inlet fro Actual measured distance	om horizontal (wall) and/or vertical (re from probe to supporting structure (m	oof) supporting structure eters)	> 1 m? Yes □ No □			
Distance of probe inlet to Is probe > 20 m from the	nearest intersection > 10 m? nearest traffic lane 2 - 10 m? nearest tree drip line? Yes					
*Distance from probe to to *Height of tree (m)	e nearest tree drip line if tree acts as an ree (m)	Direction from				
*Identify obstacle I *Is distance from inlet pro	eair flow? *Yes [] (answer *'d questi Distance from probe inlet (m) obe to obstacle at least twice the height est traffic lane (m)Direction fr	Direction from probe inle t that the obstacle protruc	des above the probe? Yes 🔲 No 🔲			
Parameters	Monitoring Objective	Scale	Site Type			
NA □ NO _y (trace-level)	General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	Micro Middle Neighborhood Urban Regional	NCORE			
Probe inlet height (from g Actual measured distance			Yes No			
2	om horizontal and/or vertical supporting from probe to supporting structure (m	27).	Yes No			
Distance of probe inlet fro	Distance of probe inlet from other monitoring probe inlets > 1 m? Yes No NA					
7.1	nearest tree drip line? Yes = *N nearest tree drip line if tree acts as an ree (m)	obstruction? Yes				
Are there any obstacles to *Identify obstacle I *Is distance from inlet pro	p air flow? *Yes (answer *'d questi Distance from probe inlet (m)b obe to obstacle at least twice the height est traffic lane (m) Direction	Direction from probe inle t that the obstacle protruc	des above the probe? Yes 🗌 No 🗌			

Parameters	Monitoring Objective	Scale	Site Type
NA NO₂ (Near Road only) CO (Near Road only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	Miero	□SLAMS □SPM □ NONREGULATORY
Probe inlet height (from groun	d) 2-15 m? Yes No	Give actual measured	height from ground (meters)
Distance of probe inlet from h	orizontal (wall) and/or vertical (ro		
Actual measured distance fron	n probe to supporting structure (m	eters)	
	ther monitoring probe inlets > 1 m		Yes 🔲 No 🗌 NA 🔲
Is probe > 20 m from the near	est tree drip line? Yes 🔲 *No	o 🗌 (answer *'d questio	ns)
*Distance from probe to tree (*Height of tree (m)	rest tree drip line if tree acts as an m)	Direction from	"No 🗆 probe to tree
Are there any obstacles to air I	flow? *Yes 🗌 (answer *'d question	ons) No 🔲	
*Identify obstacle Dista	nce from probe inlet (m)Di	rection from probe inlet t	o obstacle
			es above the probe? Yes 🗌 No 🗌
Distance of probe to nearest tr	affic lane (m) Direction	from probe to nearest tra	ffic lane
Parameters	Monitoring Objective	Scale	Site Type
M	and the second	CHARLES WAR	For some cases.
A COMPANY OF THE STATE OF THE S	Highest Concentration	Micro	1.1
□ m m =	Population Exposure Source Oriented	Middle	
☐ TSP	Background	Neighborhood_	
□ Pb □	Transport	Urban	NONREGULATORY
	Welfare Related Impacts	Regional	
Probe inlet height (from groun	ıd) □<2 m □ 2-7m _	□ 7-15 m	> 15 m
	n probe inlet to ground (meters)		
Actual measured distance from	i probe fillet to ground (fileters)		
Distance of inlet from horizon Actual measured distance from	tal (wall) and/or vertical (platform n probe to supporting structure (m	or roof) supporting structers)	eture > 2 m? Yes No No
Distance between collocated P	M-10, TSP or Pb sampler inlets =	2 to 4 m?	Yes No NA
	veen collocated probes (meters)		
	lume inlet and any other high or lo	The second secon	Ves □ No □ NA □
	est tree drip line? Yes . *No		
*Distance from probe to tree (*Height of tree (m)	rest tree drip line if tree acts as an m)	Direction from	Probe to tree
Are there any obstacles to air I	flow? *Yes 🔲 (answer *'d questio	ons) No 🔲	
*Identify obstacle Dista	nnce from probe inlet (m)Dir	ection from probe inlet to	o obstacle
*Is distance from inlet probe to	o obstacle at least twice the height	that the obstacle protrud	es above the probe? Yes 🗌 No 🔲
	affic lane (m) Direction		

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Parameters	Monitoring Objective	Scale	Site Type
□NA	General/Background	Micro	⊠SLAMS
Air flow < 200 L/min	Highest Concentration_	□Middle	□ NCORE
	Population Exposure	⊠Neighborhood	SPM
PM10-2.5	Source Oriented	□Urban	■ NONREGULATORY
PM10 Lead (PB)	Transport	Regional	100
☐ PM2.5 Cont. (TEOM) ☐ PM2.5 Cont. (BAM)	☑Upwind Background		
PM2.5 Spec. (SASS)	Welfare Related Impacts		
PM2.5 Spec. (URG)			
PM2.5 Cont. Spec.			
Probe inlet height (from gro Actual measured distance fr	und) $\square < 2 \text{ m} \qquad \square 2-7 \text{m}$ om probe inlet to ground (meters) 2	[_] 7-15 m	> 15 m
	ontal (wall) and/or vertical (platform or		> 2 m? Yes No
Distance between inlets of a site = 1 m or greater?	ny low volume monitor and any other l	ow volume monitor at the	Yes □ No □ NA ☒
	lume monitor inlets and any Hi-Volum	e PM-10 or TSP inlet = 2 i	m Yes□ No□ NA⊠
or greater?			Ies LI NOLI NAM
TEOM, BAM & TEOM) Lo	tors (Two FRMs, FRM & BAM, FRM scated at Site?	~ i es ∐ (ans	wer *'d questions) No 🛛 NA 🗌
	ed PM 2.5 sampler inlets = 1 to 4 m? pler inlets within 1 m vertically of each		Give actual (meters)
	llocated with a SASS monitor at the site		questions) No 🛛 NA 🗌
	ed speciation sampler inlets = 1 to 4 m sampler inlets within 1 m vertically of o		Give actual (meters)
Is a low-volume PM10 mon	itor collocated with a PM2.5 monitor at	TO THE THE PARTY OF THE PARTY O	wer *'d questions) No 🛛 NA 🗌
to measure PM10-2.5?			- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10
	ed PM10 and PM2.5 inlets for PM10-2. PM2.5 sampler inlets within 1 m vertice		Yes No No No No
	arest tree drip line? Yes a "No		163
*Is probe > 10 m from the n	earest tree drip line if tree acts as an ob	struction? Yes *No	
*Distance from probe to tree		Direction from pro	
*Height of tree (m) Are there any obstacles to a	r flow? *Yes (answer *'d questions	i No 🛛	
	stance from probe inlet (m)Dire		shetacle
*Is distance from inlet probe	to obstacle at least twice the height the	at the obstacle protrudes al	bove the probe? Yes 🗌 No 🗌
Distance of probe to nearest	traffic lane (m) 19 Direction from p	robe to nearest traffic lane	<u>SW</u>
RECOMMENDATIONS:	523 - 75-38		
	atus? Yes ⊠ *No □ (answer *'d		
	njective? Yes [(enter new objective	0.0) No []-
*4) Relocate site? Yes [sentativeness? Yes 🗌 (enter new sc	ale) No [
4) Relocate site: Tes [
Comments:			-
Reviewer C. Marshall Can	non		Date 01/04/2012
Ambient Monitoring Coord	dinator ELT		DateJanuary 9, 2012
Revised 2012-03-13			
W GIMEDENSO	11 pogy Joette Steger	Digitally operating retaining and pro-	NAME OF THE PARTY

Site Information

Region RRO Site Name Millbrook		AQ	AQS Site # 37- 18 - 0014				
Street Add	ress_ 3801 S	pring Forest Rd.	_CC	City	City Raleigh		
Urban Area	RALEIGH		Core-based	Statistical Area Raleigh-Cary, NC			
		iter Exact					
Longitude			N35.85611	_	Method of Measu	ıring	
n Decimal Degrees In Decimal Degrees				GPS	Explanation: GPS	Ž.	
		n Sea Level (in m			100		
Name of nearest	road to inlet pr	obe Spri	ng Forest Rd		ADT <u>17000</u> Year	2007	
Comments:							
Distance of site t	o nearest majo	r road (m) 40.00 Di	rection from site	to nearest maj	jor road <u>SW</u>		
Name of nearest	major road _	Spring Fores	st Rd.	ADT 1	7000 Year 2007		
Comments:							
Site located near	electrical subs	tation/high voltage p	ower lines?		Ycs	3 □ No 🏻	
Distance of site	to nearest rai	Iroad track		(m)	Direction to RR	⊠NA	
			PAGE CONTRACT NO.		Direction	a s a s a	
Distance betwee	n eite and drin	wer pole w/transfo line of water tower (r	n) Dire	tion from eite	to water tower	⊠NA	
Evolain any so	rence of noton	tial biast include of	ultivated fields	loose bull et	torage, stacks, vents, rai		
construction ac	tivities, fast fe	ood restaurants, and	d swimming po	ols.	9.		
0							
ANSWED AT	LADDITCAD	LE QUESTIONS:					
Paramet		Monitoring Obje	ective	Scale	Site	e Type	
ΠNA			DOCUME TO SERVE	27	Takan (2000)	10 CA1611	
SO ₂ (NAA		General/Backgroun Highest Concentrat		Micro		1.8	
SO ₂ (trace	9,50000900	Max O3 Concentrat	tion	Middle	20 New York (2002)		
NO, (NA	AQS)	Population Exposur	e	Neighborhoo			
□HSNO _y		Source Oriented		Urban	SPM/OPN_		
□ NII ₁		Transport	_ [[Regional	□NONREGU	LATORY	
∐ydrocart		Upwind Backgroun					
☐ Air Toxic]Welfare Related Im	pacts				
HSCO (N							
CO (trace-		h 2.15 m2 Vec ☑	No. I	Tive actual me	easured height from ground	(maters) 2	
			To 12 12 12 12 12 12 12 12 12 12 12 12 12		icture > 1 m? Yes 🖂		
Actual measure	distance from	probe to supporting	structure (meter	s) 1	1111. 100/4		
		her monitoring probe			Yes 🖂	No 🗌 NA 🔲	
		st tree drip line? Y		(answer "'d o		-8/4/ -8/-14	
*Is probe > 10 n	from the near	est tree drip line if tr	ee acts as an obs	truction? Yo	es⊠ *No□		
					tion from probe to tree E	NK	
*Height of tree		100			1 1 2	L. Sale	
		ow? *Yes [] (answe	er 8'd questions)	No 🛛			
		15 S		236	be inlet to obstacle		
					protructes above the probe?	Yes No [
	a mater probe to	DESIRETE BY TERST INT	oc are negani this	THE CUSTACIC	a on ones above the proces	168 740	
Distance of prob	e to nearest tra	ffic lane (m) 40 E		obe to nearest	traffic lane SW		

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Parameters	Monitoring Objective	Scale	Site Type
NA □CO (Micro Only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	□Micro	SLAMS SPM SPM/OPN NONREGULATORY
Probe inlet height (from gr Actual measured distance	round) 2.5 - 3.5 m? from probe inlet to ground (meters) _		Yes No
	m horizontal (wall) and/or vertical (ro from probe to supporting structure (m		> l m? Yes ☐ No ☐
Distance of probe inlet to a	nearest intersection > 10 m? nearest traffic lane 2 - 10 m? nearest tree drip line? Yes \(\text{ Yes} \)	O O Annuar 9° d quartin	Yes No Yes No
*Is probe ≥ 10 m from the	nearest tree drip line if tree acts as an	obstruction? Yes 🗌	*No 🗆
Are there any obstacles to *Identify obstacle I *Is distance from inlet pro	air flow? *Yes [(answer *'d question Distance from probe inlet (m)I be to obstacle at least twice the height st traffic lane (m) Direction fr	Direction from probe inle that the obstacle protrud	les above the probe? Yes 🔲 No 🗍
		Scale	
Parameters NA NO _y (trace-level)	Monitoring Objective General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	MicroMiddleUrbanRegional	NCORE
Probe inlet height (from gr Actual measured distance	round) 10-15 m? from probe inlet to ground (meters) _	10_	Yes No 🗌
	m horizontal and/or vertical supportin from probe to supporting structure (m		Yes⊠ No□
Distance of probe inlet fro	m other monitoring probe inlets > 1 m	?	Yes □ No ☑ NA □
	nearest tree drip line? Yes *No nearest tree drip line if tree acts as an ee (m)9	obstruction? Yes 🖂	
	air flow? *Yes [(answer *'d question	ons) No 🖾	
*Identify obstacle f *Is distance from inlet pro	Distance from probe inlet (m)I he to obstacle at least twice the height st traffic lane (m) 45 Direction from	Direction from probe inle that the obstacle protruc	les above the probe? Yes 🔲 No 🔲

Parameters	Monitoring Objective	Scale	Site Type
NA □NO₂ (Near Road only) □CO (Near Road only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	□Micro	□ SLAMS □ SPM □ NONREGULATORY
Distance of probe inlet from Actual measured distance from	and) 2-15 m? Yes No No horizontal (wall) and/or vertical (room probe to supporting structure (moother monitoring probe inlets > 1 m	of) supporting structure > eters)	14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
*Is probe > 10 m from the ne	rest tree drip line? Yes = *No earest tree drip line if tree acts as an (m)	obstruction? Yes 🗌 *	No 🗆
*Identify obstacle Dis *Is distance from inlet probe	flow? *Yes [] (answer *'d questic tance from probe inlet (m)Dir to obstacle at least twice the height traffic lane (m) Direction	ection from probe inlet to that the obstacle protrude	s above the probe? Yes No
Parameters	Monitoring Objective	Scale	Site Type
Air flow > 200 L/min ☐ PM10 ☐ TSP ☐ Pb	Highest ConcentrationPopulation Exposure	Urban	SLAMS NOORE SPM NONREGULATORY
Actual measured distance from Distance of inlet from horizon	and)	or roof) supporting struct	
Actual measured distance fro	m probe to supporting structure (me	eters)	
Actual measured distance be	PM-10, TSP or Pb sampler inlets = tween collocated probes (meters) _ olume inlet and any other high or lo		
Is probe > 20 m from the nea	rest tree drip line? Yes - *No	(answer *'d question	s)
*Is probe > 10 m from the no *Distance from probe to tree *Height of tree (m)	earest tree drip line if tree acts as an (m)		No Dprobe to tree
*Identify obstacle Dis	flow? *Yes [] (answer *'d question tance from probe inlet (m)Direct	ection from probe inlet to	
*Is distance from inlet probe Distance of probe to nearest	to obstacle at least twice the height traffic lane (m) Direction	that the obstacle protrude from probe to nearest traf	

Parameters	Monitoring Objective	Scale	Site Type
NA Air flow < 200 L/min NA PM2.5 PM10 PM10-2.5 PM10 Lead (PB) PM2.5 Cont. (TEOM) PM2.5 Cont. (BAM) PM2.5 Spec. (SASS) PM2.5 Spec. (URG) PM2.5 Cont. Spec.	General/Background Highest Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	☐Micro	SI.AMS NCORE SPM NONREGULATORY
Distance of inlet from horized Distance between inlets of a site = 1 m or greater? Distance between all low voor greater? Are collocated PM2.5 Moni TEOM, BAM & TEOM) Le *Distance between collocate	und) 2 m 2 2-7m om probe inlet to ground (meters) ontal (wall) and/or vertical (platform or ny low volume monitor and any other slume monitor inlets and any Hi-Volum tors (Two FRMs, FRM & BAM, FRM scated at Site? ed PM 2.5 sampler inlets — 1 to 4 m? pler inlets within 1 m vertically of each	r roof) supporting structure > low volume monitor at the ne PM-10 or TSP inlet = 2 m *Yes ⊠ (answer	□ > 15 m 2 m? Yes □ No □ NA □ Yes □ No □ NA □ Yes □ No □ NA □ er *'d questions) No □ NA □ Give actual (meters) Give actual (meters)
Is an URG 3000 monitor co * Distance between collocat * Are collocated speciation Is a low-volume PM10 mon	llocated with a SASS monitor at the sit ed speciation sampler inlets - 1 to 4 m sampler inlets within 1 m vertically of itor collocated with a PM2.5 monitor a	te? *Yes ☐ (answer *'d qu n? Yes ☒ No ☐ each other? Yes ☒ No ☐	
*Are collocated PM10 and I Is probe > 20 m from the ne *Is probe > 10 m from the n	ed PM10 and PM2.5 inlets for PM10-2 PM2.5 sampler inlets within 1 m vertice arest tree drip line? Yes **No [carest tree drip line if tree acts as an of e (m)	ally of each other? Y (answer *'d questions) bstruction? Yes X *No ☐	'es ⊠ No □
*Identify obstacle Di *Is distance from inlet probe	ir flow? *Yes [(answer *'d question stance from probe inlet (m)Dir e to obstacle at least twice the height the traffic lane (m) Direction from	rection from probe inlet to obs at the obstacle protrudes about	ve the probe? Yes 🗌 No 🗌
*2) Change monitoring ob	atus? Yes ⊠ *No ☐ (answer *`d ojective? Yes ☐ (enter new objectiv sentativeness? Yes ☐ (enter new so ☐ No ☐	e) No []-) No []
Comments:			
Reviewer RAT		Dat	teDecember 20, 2011
Ambient Monitoring Coors	dinator <u>ELT</u>	-	DateJanuary 3, 2012
Revised 2012-05-29			

ML SITE REVIEW 2011.DOCX

Site Information

Region_RRO Site Name FY Street Address_ 201 North Broad Street		AQS	AQS Site # 37- 183 - 0016 City FUQUAY VARINA		
		City_1			
Urban Area	FUQUAY-V.	ARINA Core-b	ased Statistical Ar		NC
	Ente	r Exact			
Longitude :	78.7925	Latitude 35,596	5944	Method of Measu	uring
In Decimal Degre	es	In Decimal Degrees		Explanation: MAI	QUEST
		Sea Level (in meters)			9
Name of nearest r	oad to inlet prob	e Bengal Blvd SR4010		ADT 1000 Year	r 2009
Comments:					
	경향 성명이 위치 하나 어떻게 되었다.	oad (m) 350.00 Direction fr		51 8 N N S S L L L L L L L L L L L L L L L L	
Name of nearest n	najor road <u>Hy</u>	55/Broad St.	ADT 1600 Y	ear 2009	
Comments:					
Site located near o	lectrical substat	ion/high voltage power lines	7	Yes	s□ No⊠
Distance of site	to nearest railro	oad track	(m) 600 Direction	on to RR SSW N	Į.A.
				100 march 201 march 25 - 70	
		er pole w/transformer of water tower (m)		Direction ESE	⊠NA
		l bias; include cultivated :			
		E QUESTIONS:	23		
Parameter	's	Monitoring Objective	Scale	Site	e Type
□NA		eneral/Background	Micro	⊠SLAMS	
SO ₂ (NAAC	200000000000000000000000000000000000000	ighest Concentration	Middle	□NCORE_	
NO _x (NAA	7 III	fax O3 Concentration opulation Exposure	⊠Neighborhood_	SPM	-01
□HSNO _y	□s	ource Oriented	Urban_	SPM/OPN_	20
⊠ O₃ □ NII₁	ППТ	ransport	Regional	□NONREGU	JLATORY
☐ Hydrocarbo		pwind Background /elfare Related Impacts			
☐ Air Toxics		enare Related Impacts			
☐ HSCO (Not ☐ CO (trace-l					
		2-15 m? Yes No	Give actual meas	ured height from ground	d (meters)
		ontal (wall) and/or vertical (영화 경기 영화 중에 가장 하면 하지 않는 것이 없다.	
Actual measured	distance from pr	obe to supporting structure (meters)		
		monitoring probe inlets > 1			No NA
		ree drip line? Yes 🛛 🍟			
*Is probe > 10 m	from the nearest	tree drip line if tree acts as a	an obstruction? Yes [
Distance from p		200	Directi	on from probe to tree	<u>S</u>
"Height of tree (n	1)	10			
		r? *Yes ☐ (answer *'d ques	stions) No 🖂		
*Identify obstacle	Distance	from probe inlet (m)	_Direction from probe	inlet to obstacle	
		stacle at least twice the heig			Yes No
Distance of probe	to nearest traffi	clane (m) 200 Direction	from probe to nearest tr	attic iane S	

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Parameters	Monitoring Objective	Scale	Site Type
NA □CO (Micro Only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	Micro	SLAMS SPM SPM/OPN NONREGULATORY
Probe inlet height (from gr Actual measured distance	round) 2.5 - 3.5 m? from probe inlet to ground (meters) _		Yes No
	m horizontal (wall) and/or vertical (ro from probe to supporting structure (m		> 1 m? Yes No
Distance of probe inlet to	nearest intersection > 10 m? nearest traffic lane 2 - 10 m? nearest tree drip line? Yes*No	o 🗆 /osomos 9° d martio	Yes No Yes No
*Is probe > 10 m from the	nearest tree drip line if tree acts as an	obstruction? Yes 🗌	*No 🗌
Are there any obstacles to *Identify obstacle I *Is distance from inlet pro	air flow? *Yes [(answer *'d question Distance from probe inlet (m) L be to obstacle at least twice the height st traffic lane (m) Direction from	Direction from probe inle that the obstacle protrud	les above the probe? Yes 🔲 No 🗍
Parameters	Monitoring Objective	Scale	Site Type
⊠NA □NO _y (trace-level)	General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	Micro Middle Neighborhood Urban Regional	SLAMS NCORE
Probe inlet height (from g	round) 10-15 m?		Yes No
Actual measured distance	from probe inlet to ground (meters))	
	m horizontal and/or vertical supporting from probe to supporting structure (m-		Yes No No
Distance of probe inlet fro	m other monitoring probe inlets > 1 m	?	Yes No NA
*Is probe > 10 m from the *Distance from probe to tr	nearest tree drip line? Yes *No nearest tree drip line if tree acts as an ee (m)	obstruction? Yes	
*Height of tree (m)	air flow? *Yes [(answer *'d question	one) No 🖂	
*Identify obstacle I	Distance from probe inlet (m)I he to obstacle at least twice the height	Direction from probe inle	les above the probe? Yes 🔲 No 🔲

Parameters	Monitoring Objective	Scale	Site Type
NA □NO₂ (Near Road only) □CO (Near Road only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	□Micro	SLAMS SPM NONREGULATORY
Distance of probe inlet from Actual measured distance from	and) 2-15 m? Yes No horizontal (wall) and/or vertical (room probe to supporting structure (moother monitoring probe inlets > 1 m	of) supporting structure > eters)	
America problems regionarily reversity in men	arest tree drip line? Yes *No	`aran	
*Is probe > 10 m from the no	earest tree drip line if tree acts as an (m)	obstruction? Yes []	*No 🗆
*Identify obstacle Dis *Is distance from inlet probe	r flow? *Yes [(answer *'d questic stance from probe inlet (m)Dir to obstacle at least twice the height traffic lane (m) Direction	rection from probe inlet to that the obstacle protrude	es above the probe? Yes 🗌 No 🗍
Parameters	Monitoring Objective	Scale	Site Type
D TSP	Highest Concentration Population Exposure Source Oriented Background Transport Welfare Related Impacts	Urban	SLAMS NCORE SPM NONREGULATORY
	and)		□ > 15 m
	ontal (wall) and/or vertical (platform om probe to supporting structure (me		ture > 2 m? Yes ☐ No ☐
Actual measured distance be	PM-10, TSP or Pb sampler inlets = tween collocated probes (meters) _ olume inlet and any other high or lo		
Is probe > 20 m from the ner	arest tree drip line? Yes 🗌 *No	answer *'d question	ns)
*Distance from probe to tree *Height of tree (m)	· · · · · · · · · · · · · · · · · · ·	Direction from	*No probe to tree
Are there any obstacles to air	r flow? *Yes 🗌 (answer *'d questic	ons) No 🗌	
*Is distance from inlet probe	stance from probe inlet (m)Director obstacle at least twice the height	that the obstacle protrude	s above the probe? Yes 🔲 No 🔲
Distance of probe to nearest	traffic lane (m) Direction	from probe to nearest traf	fic lane

Parameters	Monitoring Objective	Scale	Site Type
NA Air flow < 200 L/min PM2.5 PM10 PM10-2.5 PM10 Lead (PB) PM2.5 Cont. (TEOM) PM2.5 Cont. (BAM) PM2.5 Spec. (SASS) PM2.5 Spec. (URG) PM2.5 Cont. Spec.	General/Background Highest Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	Micro Middle Neighborhood Urban Regional	SI.AMS NCORE SPM NONREGULATORY
Distance of inlet from horized Distance between inlets of a site = 1 m or greater? Distance between all low voor greater? Are collocated PM2.5 Moni TEOM, BAM & TEOM) Le *Distance between collocate	xd PM 2.5 sampler inlets - 1 to 4 m?	r roof) supporting structure > low volume monitor at the ne PM-10 or TSP inlet = 2 m & *Yes \(\) (answer Yes \(\) No \(\)	Yes No NA NA Yes No NA NA Tar *'d questions) No NA Give actual (meters)
Is an URG 3000 monitor co * Distance between collocat * Are collocated speciation	pler inlets within 1 m vertically of each llocated with a SASS monitor at the sit ed speciation sampler inlets - 1 to 4 m sampler inlets within 1 m vertically of itor collocated with a PM2.5 monitor a	c? *Yes (answer *'d qu 1? Yes No each other? Yes No	Give actual (meters) Give actual (meters) Give actual (meters) Give actual (meters) T*'d questions) No NA
to measure PM10-2.5? *Distance between collocate *Are collocated PM10 and I	ed PM10 and PM2.5 inlets for PM10-2 PM2.5 sampler inlets within 1 m vertical arest tree drip line? Yes 7 months a	.5 samplers = 1 to 4 m? Y ally of each other? Y	30 - 10-10-71 - 10-10-10-10-10-10-10-10-10-10-10-10-10-1
*Distance from probe to tree *Height of tree (m)	earest tree drip line if tree acts as an ob e (m)	Direction from probe	
*Is distance from inlet probe Distance of probe to nearest	stance from probe inlet (m)Dir to obstacle at least twice the height th traffic lane (m) Direction from	at the obstacle protrudes abo	ve the probe? Yes 🔲 No 🗌
*2) Change monitoring ob	atus? Yes ⊠ *No □ (answer *`d njective? Yes □ (enter new objective sentativeness? Yes □ (enter new so □ No ⊠	e) No 🛛) No 🖾
Comments:			
Reviewer Roy Doster			DateJanuary 9, 2012
Ambient Monitoring Coord	dinator ELT	4	DateJanuary 9, 2012
Revised 2012-05-29			

UQ 2011SITE REVIEW FORM2.DOCX

Site Information

Region RRO Site Name Franklinton		A	AQS Site # 37-69 - 001					
Street Addr	ess_s	ate Roac	1 1127	W.	City Frankl	City Franklinton		
Urban Area	RALEI	GH		Core-bas	sed Statistical Area	a Raleigh-C	ary, NC	
		Enter l						
Longitude .		059			1 1	Method of !	Measuring	
In Decimal Degre			In Decimal	A TOUR DAY	Interpolation	on Explan	ation: Google Maps	
Elevation Abov							- (:	
Name of nearest	road to in	let probe	SR	1127	ADT	2200 Year 20	006	
Comments:				-				
			- 1997 - ENGLISH STAN		m site to nearest major			
Name of nearest	major roa	d	US-1	A	DT <u>18000</u> Year <u>200</u>	7		
Comments:				-				
Site located near	electrical	substatio	n/high voltage	power lines?	8		Yes No No	
Distance of site	to neare	st railroa	d track		(m) 0_Direction t	o RR	⊠NA	
	K STANDERNOOS		Marchine Control	Formus on		rection		
Distance of site Distance between					Direction from site to		□NA	
					elds, loose bulk stora			
		CADE E	OFFERIONS	20				
ANSWER AL Paramete			Agentaring Ob		Scale	-	Site Type	
NA SO₂ (NAA SO₂ (trace- NO₄ (NAA HSNO₂ SO₃ HSNO₂ SO₃ NH₃ Hydrocarb Air Toxics HSCO (No	level) AQS) on ot Micro)	☐ Hig ☐ Ma ☑ Pop ☐ Son ☐ Tre ☐ Up	neral/Backgrou ghest Concentr ix O3 Concentr pulation Expos irce Oriented_ insport_ wind Backgrou elfare Related I	ation ation ure and	Micro Middle Neighborhood Murban Regional	NC SP SP	AMS CORE M M/OPN ONREGULATORY	
Probe inlet heigh	THE PERSON NAMED IN COLUMN 1	round) 2-	15 m? Yes ∑	No 🗆	Give actual measu	red height fro	m ground (meters) 2.5	
					oof) supporting structu	re > 1 m? Y	es No 🗆	
Actual measured			15/5/-00					
Distance of prob	e inlet fro	m other r	nonitoring prol	be inlets > 1	m?		es No NA	
					No [] (answer **d ques			
			ree drip line if	tree acts as a	n obstruction? Yes			
*Distance from p		ree (m)_			Direction fi	rom probe to to	ree	
*Height of tree (m)	- C	*15. 🗆	07.1	KZI			
Are there any ob			nuncuus tinnista talaan	ture constitution of the c				
	Marian Company			Name and Advanced to the Parket	Direction from probe i		Simon and the same of the same	
							e probe? Yes 🗌 No 🔲	
Distance of prob	e to neare	st traffic	lane (m)	Direction	n from probe to nearest	traffic lane _		

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Parameters	Monitoring Objective	Scale	Site Type
⊠ NA □CO (Micro Only)	Highest ConcentrationPopulation ExposureSource OrientedTransportWelfare Related Impacts	Miero	□SLAMS □SPM_ □SPM/OPN_ □ NONREGULATORY
Probe inlet height (from gr Actual measured distance	round) 2.5 - 3.5 m? from probe inlet to ground (meters)		Yes No
Distance of probe inlet fro Actual measured distance	m horizontal (wall) and/or vertical (ro from probe to supporting structure (m	of) supporting structure eters)	> 1 m? Yes No
Distance of probe inlet to	nearest intersection > 10 m? nearest traffic lane 2 - 10 m? nearest tree drip line? Yes	o [] (answer *'d questio	Yes No Yes No No
*Is probe > 10 m from the *Distance from probe to tr	nearest tree drip line if tree acts as an	obstruction? Yes	*No 🗌
*Height of tree (m) Are there any obstacles to	air flow? *Yes [(answer *'d questi	ons) No 🗍	
*Identify obstacle I	Distance from probe inlet (m)I be to obstacle at least twice the height	Direction from probe inle	
	st traffic lane (m)Direction fr		
Parameters	Monitoring Objective	Scale	Site Type
⊠ NA □ NO _y (trace-level)	General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	☐Micro ☐Middle	SLAMS NCORE SPM
Probe inlet height (from gr Actual measured distance			Yes No
2	m horizontal and/or vertical supporting	7)	Yes No
Distance of probe inlet fro	m other monitoring probe inlets > 1 m	1?	Yes No NA
*Is probe > 10 m from the *Distance from probe to tr	nearest tree drip line? Yes - *N nearest tree drip line if tree acts as an ree (m)	obstruction? Yes	
*Identify obstacle I *Is distance from inlet pro	air flow? *Yes (answer *'d questi Distance from probe inlet (m)I be to obstacle at least twice the height st traffic lane (m) Direction	Direction from probe inle that the obstacle protruc	les above the probe? Yes 🔲 No 🔲

Parameters	Monitoring Objective	Scale	Site Type
☑ NA □NO₂ (Near Road only) □CO (Near Road only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	Micro	SLAMS □SPM □ NONREGULATORY
	d) 2-15 m? Yes No		하는 사람이 있다면 하는 것이 하는 것이 없는 것이 하는 것이 없어 없어 없어 없다면 하는 것이 없다면 하는데 없다면
	orizontal (wall) and/or vertical (ro		∘1 m? Yes □ No □
	probe to supporting structure (mo		
	ther monitoring probe inlets > 1 m		Yes No NA
Is probe > 20 m from the near	est tree drip line? Yes 🔲 *No	o 🗌 (answer *'d question	ns)
*Distance from probe to tree () *Height of tree (m)	rest tree drip line if tree acts as an	Direction from	
Are there any obstacles to air f	low? *Yes 🗌 (answer *'d questio	ons) No 🔲	
THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAME	nce from probe inlet (m)Dir		1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (
	o obstacle at least twice the height affic lane (m) Direction		es above the probe? Yes No G
Distance of proof to mearest un	sitie lane (iii) Direction	nom proce to nearest tra	Interiality
Parameters	Monitoring Objective	Scale	Site Type
Air flow > 200 L/min	Highest Concentration Population Exposure Source Oriented Background Fransport Welfare Related Impacts	MicroMiddle	NCORE
	d)		> 15 m
Actual measured distance from	probe inlet to ground (meters)		
Distance of inlet from horizon	tal (wall) and/or vertical (platform	or roof) supporting struc	eture > 2 m? Yes No
Actual measured distance from	probe to supporting structure (mo	eters)	
	M-10, TSP or Pb sampler inlets =		Yes No NA
	reen collocated probes (meters)		
Distance between any high vol	ume inlet and any other high or lo	ow volume inlet ≥ 2 m?	Yes No NA
Is probe > 20 m from the near	est tree drip line? Yes 🔲 "No	o 🗌 (answer *'d question	ns)
*Distance from probe to tree () *Height of tree (m)	rest tree drip line if tree acts as an m)	Direction from	
Are there any obstacles to air f	low? *Yes 🗌 (answer *'d questio	ons) No 🗌	
*Identify obstacle Dista	nce from probe inlet (m)Dire	ection from probe inlet to	obstacle
			es above the probe? Yes 🗌 No 🗌
Distance of probe to nearest tra	affic lane (m) Direction	trom probe to nearest tra	ffic lane

Parameters	Monitoring Objective	Scale	Site Type		
NA	General/Background	Micro	SLAMS		
Air flow < 200 L/min	Highest Concentration_	Middle	□ NCORE		
☐ PM2.5 ☐ PM10	Population Exposure	Neighborhood	□SPM		
☐ PM10-2.5	Source Oriented	□Urban	NONREGULATORY		
PM10 Lead (PB) PM2.5 Cont. (TEOM)	Transport	Regional_	6 1 1 6		
PM2.5 Cont. (BAM)	Upwind Background				
PM2.5 Spec. (SASS)	Welfare Related Impacts				
PM2.5 Spec. (URG) PM2.5 Cont. Spec.					
Probe inlet height (from gro Actual measured distance from	und)	7-15 m	> 15 m		
	ontal (wall) and/or vertical (platform or		2 m? Yes No No		
Distance between inlets of a site = 1 m or greater?	ny low volume monitor and any other l	ow volume monitor at the	Yes No NA		
Distance between all low vo or greater?	lume monitor inlets and any Hi-Volum		Yes □ No □ NA □		
Are collocated PM2.5 Monit TEOM, BAM & TEOM) Lo	tors (Two FRMs, FRM & BAM, FRM cated at Site?	& *Yes ☐ (answe	er **d questions) No 🗌 NA 🗍		
*Distance between collocate	d PM 2.5 sampler inlets = 1 to 4 m?		Give actual (meters)		
	oler inlets within 1 m vertically of each	55.00	Give actual (meters)		
	located with a SASS monitor at the site ed speciation sampler inlets = 1 to 4 m		uestions) No NA Give actual (meters)		
	sampler inlets within 1 m vertically of				
Is a low-volume PM10 monitor collocated with a PM2.5 monitor at the site to measure PM10-2.5?					
*Distance between collocated PM10 and PM2.5 inlets for PM10-2.5 samplers = 1 to 4 m? Yes No *Are collocated PM10 and PM2.5 sampler inlets within 1 m vertically of each other? Yes No Is probe > 20 m from the nearest tree drip line? Yes *No (answer *'d questions)					
0.		5(M) (47))	-		
*Is probe > 10 m from the n *Distance from probe to tree	earest tree drip line if tree acts as an ob				
*Height of tree (m)	10.00		_		
	Are there any obstacles to air flow? *Yes [(answer *'d questions) No [
*Identify obstacle Dis	stance from probe inlet (m)Dire to obstacle at least twice the height the	ection from probe inlet to ob	stacle No O		
Distance of probe to nearest	traffic lane (m) Direction fro	m probe to nearest traffic la	ne		
RECOMMENDATIONS:	5923 99 30	10			
	atus? Yes 🛛 *No 🗌 (answer *'d o				
	jective? Yes (enter new objective) No []-		
	sentativeness? Yes [] (enter new so	ale) No [
*4) Relocate site? Yes [_ No _				
Comments:			ä		
Reviewer Jin	ımy Reske		Date 01/03/12		
Ambient Monitoring Coord	dinator elt		DateJanuary 9, 2012		
Revised 2012-03-13					
FT_2011SITE_R	EVIEW_FORM2.DOCX Joette:	Steger	A Section of the sect		

Site Information

Region_RRO Site Name SR		AQS Site # 37- 065 - 0004			
Street Address 900 Springfield Rd.		City_R	City Rocky Mt., NC		
Urban Area ROCKY MOUNT Core-based Statistical Area Rocky Mount, NC					
	Enter 1				
Longitude -W 0	7745'0"	Latitude	N35 56' 0"		Method of Measuring
In Decimal Degrees	5113	In Decimal	Degrees	GPS 1	Explanation: Google Maps
Elevation Above/bel				10 - 70771	33
Name of nearest road t	o inlet probe	Springfield	Rd.		ADT <u>4300</u> Year <u>2007</u>
Comments:					
Distance of site to near		000 300-00		5.1	
Name of nearest major	read US 64	Business		ADT 12000	Year <u>2007</u>
Comments:	2000	<u> </u>			0.335
Site located near electr	ical substation	/high voltage p	ower lines?		Yes □ No 🏻
Distance of site to ne	arest milmad	Ltrack	(m)	3800	Direction to RR E NA
Distance of site to ne Distance between site:			ormer (m)	75 Direction	on <u>E</u> water tower NA
			ultivated fields los	n nem sue to	age, stacks, vents, railroad tracks,
construction activitie	s, fast food r	estaurants, an	d swimming pools.	•	
ANSWER ALL AP					70,000,000,000,000
Parameters	M	onitoring Obj	ective	Scale	Site Type
NN	Gene	eral/Backgroun	id Mi	iero	SLAMS
SO ₂ (NAAQS) SO ₃ (trace-level)		est Concentrat	ion □M	iddle	
NO. (NAAQS)	TATELY	O3 Concentral dation Exposur	tion	ighborhood_	
HSNO,	Logs	ree Oriented	- The state of the	ban	
□ ₀ ,	Tran	sport		gional	□NONREGULATORY
☐ NH ₃ ☐ Hydrocarben	Upw	ind Backgroun	id		
Air Toxics	Welf	fare Related Im	pacts		
HSCO (Not Mic					
CO (trace-level)		E 9 37 17	N2-17 205-	v	11 11 11 11 11 11 11 11 11 11 11 11 11
					ured height from ground (meters) ure > 1 m? Yes No
Distance of probe inte Actual measured dista Distance of probe inte	nce from probe	e to supporting	structure (meters)	Jorning Structi	des The Tes No
					Yes □ No □ NA □
Is probe ≥ 20 m from t	the nearest tree	drip line? Y	cs / "No / (ar	iswer **d que	stions)
*Is probe > 10 m from	the nearest tre	e drip line if tr	ce acts as an obstruc	tion? Yes	□ *No □
					from probe to tree
	The state of				
*Height of tree (m)				13	
*Height of tree (m) Are there any obstacle	s to air flow? *	Yes 🗌 (answ	er "'d questions) No		
Are there any obstacle					inlet to obstacle
Are there any obstacle *Identify obstacle	_ Distance fro	om probe inlet icle at least twi	(m)Direction ce the height that the	n from probe e obstacle pro	trudes above the probe? Yes 🔲 No

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Parameters	Monitoring Objective	Scale	Site Type
NA □CO (Micro Only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	Micro	SLAMS SPM SPM/OPN NONREGULATORY
Probe inlet height (from gr Actual measured distance	round) 2.5 - 3.5 m? from probe inlet to ground (meters) _	_	Yes No
	m horizontal (wall) and/or vertical (ro from probe to supporting structure (m		> I m? Yes ☐ No ☐
Distance of probe inlet to a	nearest intersection > 10 m? nearest traffic lane 2 - 10 m? nearest tree drip line? Yes*No	O Consumer 9'd supertion	Yes No Yes No
*Is probe ≥ 10 m from the	nearest tree drip line if tree acts as an	obstruction? Yes 🗌	*No 🗆
Are there any obstacles to *Identify obstacle I *Is distance from inlet pro	air flow? *Yes [] (answer *'d question Distance from probe inlet (m)I be to obstacle at least twice the height st traffic lane (m)Direction fr	Direction from probe inle that the obstacle protrud	les above the probe? Yes 🔲 No 🗍
Parameters	Monitoring Objective	Scale	Site Type
□ NA □ NO _y (trace-level)	General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	Micro	□SLAMS □ NCORE
Probe inlet height (from gr Actual measured distance			Yes No
	m horizontal and/or vertical supporting from probe to supporting structure (m-		Yes No
Distance of probe inlet fro	m other monitoring probe inlets > 1 m	?	Yes No NA
	nearest tree drip line? Yes : *No nearest tree drip line if tree acts as an ee (m)	obstruction? Yes	
Are there any obstacles to	air flow? *Yes [(answer *'d question Distance from probe inlet (m) I he to obstacle at least twice the height st traffic lane (m) Direction	Direction from probe inle	les above the probe? Yes 🔲 No 🔲

Parameters	Monitoring Objective	Scale	Site Type
NA □NO₂ (Near Road only) □CO (Near Road only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	□Micro	SLAMS SPM NONREGULATORY
Distance of probe inlet from Actual measured distance from	and) 2-15 m? Yes No No horizontal (wall) and/or vertical (room probe to supporting structure (moother monitoring probe inlets > 1 m	of) supporting structure > eters)	
*Is probe > 10 m from the n	arest tree drip line? Yes *No earest tree drip line if tree acts as an (m)	obstruction? Yes 🗌	*No 🗆
*Identify obstacle Dis *Is distance from inlet probe	r flow? *Yes [(answer *'d questic stance from probe inlet (m)Dir to obstacle at least twice the height traffic lane (m) Direction	rection from probe inlet to that the obstacle protrude	es above the probe? Yes 🗌 No 🔲
Parameters	Monitoring Objective	Scale	Site Type
☐ PM10 ☐ TSP	Highest Concentration Population Exposure Source Oriented Background Transport Welfare Related Impacts	Urban	SLAMS NCORE SPM NONREGULATORY
Actual measured distance from	and)		
	om probe to supporting structure (me		ture 2 m? 1es No
Actual measured distance he	PM-10, TSP or Pb sampler inlets = tween collocated probes (meters) _ olume inlet and any other high or lo		
Is probe > 20 m from the nea	arest tree drip line? Yes 🗌 *No	answer * d question	ns)
*Distance from probe to tree *Height of tree (m)	· · · · · · · · · · · · · · · · · · ·	Direction from	Prohe to tree
Are there any obstacles to ai	r flow? *Yes 🗌 (answer *'d questic	ons) No 🗌	
	stance from probe inlet (m)Director obstacle at least twice the height	17.	ohstacle sahove the probe? Yes No
Distance of probe to nearest	traffic lane (m) Direction	from probe to nearest trat	fic lane

Parameters	Monitoring Objective	Scale	Site Type
NA Air flow < 200 L/min PM2.5 PM10 PM10-2.5 PM10 Lead (PB) PM2.5 Cont. (TEOM) PM2.5 Cont. (BAM) PM2.5 Spec. (SASS) PM2.5 Spec. (URG) PM2.5 Cont. Spec.	General/Background		SI.AMS NCORE SPM NONREGULATORY
Distance of inlet from horized Distance between inlets of a site = 1 m or greater? Distance between all low voor greater? Are collocated PM2.5 Moni TEOM, BAM & TEOM) Le *Distance between collocate	ed PM 2.5 sampler inlets - 1 to 4 m?	r roof) supporting structure > low volume monitor at the ne PM-10 or TSP inlet = 2 m *Yes (answer	Yes No No NA Yes No No NA C
Is an URG 3000 monitor co *Distance between collocat	pler inlets within 1 m vertically of each llocated with a SASS monitor at the sit ed speciation sampler inlets - 1 to 4 m sampler inlets within 1 m vertically of	te? *Yes ☐ (answer *'d qu n? Yes ☐ No ☐	Give actual (meters) aestions) No 🖾 NA 🔲 Give actual (meters) Give actual (meters)
to measure PM10-2.5? *Distance between collocate *Are collocated PM10 and I Is probe > 20 m from the ne *Is probe > 10 m from the n *Distance from probe to tree *Height of tree (m)	ed PM10 and PM2.5 inlets for PM10-2 PM2.5 sampler inlets within 1 m vertic arest tree drip line? Yes *No [carest tree drip line if tree acts as an ole (m) ir flow? *Yes (answer *'d question)	2.5 samplers = 1 to 4 m? Yeally of each other? Yes (answer *d questions) bestruction? Yes *No Direction from probe	'es
*Is distance from inlet probe	stance from probe inlet (m)Dir e to obstacle at least twice the height the traffic lane (m) Direction from	nat the obstacle protrudes abo	ve the probe? Yes 🗌 No 🗌
*2) Change monitoring ob	atus? Yes ⊠ *No □ (answer *'d ojective? Yes □ (enter new objectiv sentativeness? Yes □ (enter new so □ No ⊠	e) No []-) No []
Comments:			
Reviewer Mike Pleasar	nt	Da	teDecember 29, 2011
Ambient Monitoring Coord	dinator <u>ELT</u>	_	DateJanuary 3, 2012
Revised 2012-05-29			

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Site Information

Region_RRO Site Name Leggett		AQS	AQS Site # 37- 065 - 009		
Street Address 245 North Carolina HWY 97		City Leggett	City Leggett		
Urban Area TARBORO Core-based Statistical Area Rocky Mount, NC					
	Enter F				
Longitude _		Latitude -77.584	45 Me	thod of Measuring	
In Decimal Degree		In Decimal Degrees	<u>Interpolation</u>	Explanation: Google Maps	
		ea Level (in meters)			
STANDARD STANDS		NC 97	ADT	_Year	
Comments:		12 \ 00.000			
			rom site to nearest major road	1 <u>558</u>	
SES 30			_ ADT 2600 Year 2009		
Comments:		CHARLES AND ADDRESS OF THE PARTY OF THE PART	-C-45	I Mari II No M	
Site located near el	ectrical substatio	n/high voltage power line	287	Ycs □ No ⊠	
Distance of site to	o nearest railroa	d track	(m)Direct	tion to RR NA	
Distance of site to	o nearest power	pole w/transformer	(m) 92 Direction S		
Distance between s	site and drip line	of water tower (m)	(m) 92 Direction S Direction from site to wat	er tower NA	
				, stacks, vents, railroad tracks,	
construction activ	aties, fast food	restaurants, and swimn	ning pools.		
ANSWER ALL	APPLICABLE	QUESTIONS:			
Parameter:		Ionitoring Objective	Scale	Site Type	
□NA	⊠Ger	neral/Background	Micro	⊠SLAMS	
SO ₂ (NAAQ	S) Hig	hest Concentration	- □Middle	100	
SO ₂ (trace-le	TATE	x O3 Concentration	Neighborhood	21 1277 1274	
□HSNO,		ulation Exposure rec Oriented	Urban	SPM/OPN	
<u>⊠</u> 0,		nsport	Regional	NONREGULATORY	
∐ NII ₃ ☐ IIydrocarbor	Up	wind Background			
☐ Air Toxics	□We	lfare Related Impacts			
HSCO (Not			0		
CO (trace-le		15 m? Yes⊠ No□	Cive actual measured	height from ground (meters)	
2.5	(Irom ground) 2-	15 III: 163 🖂 146 🗆	One actual measured	neight from ground (meters)	
Distance of probe	inlet from horizon	ntal (wall) and/or vertical	(roof) supporting structure >	· 1 m? Yes ⊠ No □	
ACCOUNT OF A COUNTY OF A COUNT		e to supporting structure	Christian Comment	15076 - 13021 1-3500 - 1	
Distance of probe inlet from other monitoring probe inlets > 1 m? Yes No NA S Is probe > 20 m from the nearest tree drip line? Yes *No (answer *'d questions)					
*Is probe > 10 m from the nearest tree drip line if tree acts as an obstruction? Yes \(\bigcap \) *No \(\Bigcap \)					
*Direction from probe to tree (m) Direction from probe to tree					
*Height of tree (m)					
*Identify obstacle Distance from probe inlet (m) Direction from probe inlet to obstacle					
*Is distance from inlet probe to obstacle at least twice the height that the obstacle protrudes above the probe? Yes No Distance of probe to nearest traffic lane (m) Direction from probe to nearest traffic lane					

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Parameters	Monitoring Objective	Scale	Site Type		
NA □CO (Micro Only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	Micro	SLAMS SPM SPM/OPN NONREGULATORY		
Probe inlet height (from gr Actual measured distance	round) 2.5 - 3.5 m? from probe inlet to ground (meters) _		Yes No		
	m horizontal (wall) and/or vertical (ro from probe to supporting structure (m		> 1 m? Yes No		
Distance of probe inlet to	nearest intersection > 10 m? nearest traffic lane 2 - 10 m? nearest tree drip line? Yes *No	o Monestrar 9° d cuartio	Yes No Yes No		
*Is probe > 10 m from the	nearest tree drip line if tree acts as an	obstruction? Yes 🗌	*No 🗌		
Are there any obstacles to *Identify obstacle I *Is distance from inlet pro	air flow? *Yes [(answer *'d question Distance from probe inlet (m) L be to obstacle at least twice the height st traffic lane (m) Direction fr	Direction from probe inle that the obstacle protrud	les above the probe? Yes 🔲 No 🗍		
Parameters	Monitoring Objective	Scale	Site Type		
⊠NA □NO _y (trace-level)	General/Background Highest Concentration Max O3 Concentration Population Exposure Source Oriented Transport Upwind Background Welfare Related Impacts	Micro	SLAMS NCORE		
Probe inlet height (from ground) 10-15 m? Yes ☐ No ☐					
Actual measured distance	from probe inlet to ground (meters)				
	m horizontal and/or vertical supporting from probe to supporting structure (m-		Yes No No		
Distance of probe inlet fro	m other monitoring probe inlets > 1 m	?	Yes No NA		
*Is probe > 10 m from the *Distance from probe to tr	nearest tree drip line? Yes *No nearest tree drip line if tree acts as an ee (m)	obstruction? Yes			
*Height of tree (m)	air flow? *Yes [(answer *'d question	one) No 🖂			
*Identify obstacle I	Distance from probe inlet (m)I he to obstacle at least twice the height	Direction from probe inle	les above the probe? Yes 🔲 No 🔲		

Parameters	Monitoring Objective	Scale	Site Type
NA □NO₂ (Near Road only) □CO (Near Road only)	Highest Concentration Population Exposure Source Oriented Transport Welfare Related Impacts	□Micro	SLAMS SPM NONREGULATORY
Distance of probe inlet from Actual measured distance from	and) 2-15 m? Yes No No horizontal (wall) and/or vertical (room probe to supporting structure (moother monitoring probe inlets > 1 m	of) supporting structure > eters)	
*Is probe > 10 m from the n	arest tree drip line? Yes *No earest tree drip line if tree acts as an (m)	obstruction? Yes 🗌	*No 🗆
*Identify obstacle Dis *Is distance from inlet probe	r flow? *Yes [(answer *'d questic stance from probe inlet (m)Dir to obstacle at least twice the height traffic lane (m) Direction	rection from probe inlet to that the obstacle protrude	es above the probe? Yes 🗌 No 🔲
Parameters	Monitoring Objective	Scale	Site Type
☐ PM10 ☐ TSP	Highest Concentration Population Exposure Source Oriented Background Transport Welfare Related Impacts	Urban	SLAMS NCORE SPM NONREGULATORY
Actual measured distance from	and)		
	om probe to supporting structure (me		ture 2 m? 1es No
Actual measured distance he	PM-10, TSP or Pb sampler inlets = tween collocated probes (meters) _ olume inlet and any other high or lo		
Is probe > 20 m from the nea	arest tree drip line? Yes 🗌 *No	answer * d question	ns)
*Distance from probe to tree *Height of tree (m)	· · · · · · · · · · · · · · · · · · ·	Direction from	Prohe to tree
Are there any obstacles to ai	r flow? *Yes 🗌 (answer *'d questic	ons) No 🗌	
	stance from probe inlet (m)Director obstacle at least twice the height	17.	ohstacle sahove the probe? Yes No
Distance of probe to nearest	traffic lane (m) Direction	from probe to nearest trat	fic lane

Parameters	Monitoring Objective	Scale	Site Type
NA	Ma 1/2 1 1	Duc	⊠SLAMS
Air flow < 200 L/min	General/Background	Micro	□ NCORE
□ PM2.5	Highest Concentration	Middle	SPM
☐ PM10 ☐ PM10-2.5	Population Exposure	⊠Neighborhood	NONREGULATORY
PM10 Lead (PB)	Source Oriented	Urban	TEST OF THE PROPERTY CONTRACTOR OF THE PROPERTY OF THE PROPERT
PM2.5 Cont. (TEOM)	Transport	Regional	3.5
☐ PM2.5 Cont. (BAM) ☐ PM2.5 Spec. (SASS)	Upwind Background		
PM2.5 Spec. (URG)	☐Welfare Related Impacts		
PM2.5 Cont. Spec.			
Actual measured distance fr	und) \boxtimes < 2 m \square 2-7m \square 2-7m om probe inlet to ground (meters) \square	2m	□ > 15 m
	ontal (wall) and/or vertical (platform of		· 2 m? Yes ⊠ No □
Site = 1 m or greater?	ny low volume monitor and any other	low volume monitor at the	Yes □ No □ NA ☒
	lume monitor inlets and any Hi-Volum	ne PM-10 or TSP inlet = 2 m	Yes□ No□ NA⊠
or greater?		1.4.	TEST NOT NAME
TEOM, BAM & TEOM) Lo	tors (Two FRMs, FRM & BAM, FRM loated at Site?	*Yes [] (answ	er *'d questions) No 🗌 NA 🛛
	xl PM 2.5 sampler inlets - 1 to 4 m?		Give actual (meters)
*Are collocated PM2.5 sam	pler inlets within 1 m vertically of eac	h other? Yes No	Give actual (meters)
	llocated with a SASS monitor at the si		
	ed speciation sampler inlets - 1 to 4 r sampler inlets within 1 m vertically of		Give actual (meters) Give actual (meters)
to measure PM10-2.5? *Distance between collocate *Are collocated PM10 and I	at PM10 and PM2.5 inlets for PM10-2 PM2.5 sampler inlets within 1 months	2.5 samplers = 1 to 4 m?	er *'d questions) No 🗌 NA 🖂 Yes 📗 No 🗍 Yes 🗎 No 🗎
	arest tree drip line? Yes 🛭 "No		
*Is probe > 10 m from the n *Distance from probe to tree *Height of tree (m)	earest tree drip line if tree acts as an o	bstruction? Yes *No E Direction from prob	
	r flow? *Yes [] (answer *'d question	ıs) No 🗌	
*Is distance from inlet probe	stance from probe inlet (m)Dir to obstacle at least twice the height the traffic lane (m) Direction fr	hat the obstacle protrudes abo	we the probe? Yes 🛛 No 🗌
RECOMMENDATIONS:	3000 - 5000	19	400 T.U.
	atus? Yes 🛛 *No 🗌 (answer **d	The state of the s	
*2) Change monitoring ob	jective? Yes 🗌 (enter new objectiv	/e) No []-
	sentativeness? Yes 🗌 (enter new s	cale) No 🗆
*4) Relocate site? Yes [□ No □		
Comments:	<u> </u>		
ReviewerJIMMY	RESKE		DateJanuary 3, 2012
Ambient Monitoring Coord	dinator elt	5	DateJanuary 9, 2012
Revised 2012-05-29			

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Appendix D-2. Scale of Representativeness

Each station in the monitoring network must be described in terms of the physical dimensions of the air parcel nearest the monitoring station throughout which actual pollutant concentrations are reasonably similar. Area dimensions or scales of representativeness used in the network description are:

- a) Microscale defines the concentration in air volumes associated with area dimensions ranging from several meters up to about 100 meters.
- b) Middle scale defines the concentration typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometers.
- c) Neighborhood scale defines concentrations within an extended area of a city that has relatively uniform land use with dimensions ranging from about 0.5 to 4.0 kilometers.
- d) Urban scale defines an overall citywide condition with dimensions on the order of 4 to 50 kilometers.
- e) Regional Scale defines air quality levels over areas having dimensions of 50 to hundreds of kilometers.

Closely associated with the area around the monitoring station where pollutant concentrations are reasonably similar are the basic monitoring exposures of the station.

There are six basic exposures:

- a) Sites located to determine the highest concentrations expected to occur in the area covered by the network.
- b) Sites located to determine representative concentrations in areas of high population density.
- Sites located to determine the impact on ambient pollution levels of significant sources or source categories.
- d) Sites located to determine general background concentration levels.
- e) Sites located to determine the extent of regional pollutant transport among populated areas.
- f) Sites located to measure air pollution impacts on visibility, vegetation damage, or other welfarebased impacts and in support of secondary standards.

The design intent in siting stations is to correctly match the area dimensions represented by the sample of monitored air with the area dimensions most appropriate for the monitoring objective of the station. The following relationship of the six basic objectives and the scales of representativeness are appropriate when siting monitoring stations:

Table D3. Site Type Appropriate Siting Scales

1. Highest concentration	Micro, middle, neighborhood (sometimes urban	
	or regional for secondarily formed pollutants)	
2. Population oriented	Neighborhood, urban	
3. Source impact	Micro, middle, neighborhood	
4. General/background & regional transport	Urban, regional	
5. Welfare-related impacts	Urban, regional	